(54) Title: FAMILY 6 ENDO–1,4–β–GLUCANASE VARIANTS AND CLEANING COMPOSIT IONS CONTAINING THEM

(57) Abstract

Cleaning compositions comprising one or more enzymes having cellulolytic activity wherein at least 25 % of the total weight of cellulolytic active protein derives from the presence of a *Humicola* endo–1,4–β–glucanase or *Humicola*–like cellulase of the glycolsyl hydrolase family 6, the *Humicola*–like cellulase being an enzyme comprising a catalytically core domain having an amino acid sequence being at least 35 % homologous to the appended SEQ ID NO:4; a method of constructing a variant of a parent *Humicola* family 6 (Cel6B) endo–beta–1,4–glucanase or a *Humicola*–like family 6 cellulase which variant has endo–beta–1,4–glucanase activity and improved detergent compatibility as compared to the parent endo–beta–1,4–glucanase or cellulase; and variants mutated eg. in positions 20, 56, 94, 95, 103, 182, 183 and 318 (Cel6B numbering).

FAMILY 6 ENDO-1,4-β-GLUCANASE VARIANTS AND CLEANING COMPOSITIONS CONTAINING THEM

The present invention relates to cleaning compositions, including laundry detergent compositions and fabric softener or fabric conditioning compositions, containing an endo-1,4-β-glucanase of the glycosyl hydrolase family 6, preferably an improved variant of a parent *Humicola* endoglucanase or *Humicola*-like cellulase; the improved variants; and a method of constructing the variants.

BACKGROUND OF THE INVENTION

Performance of a cleaning composition, for use in a washing or cleaning method, such as a laundry, dishwashing or surface cleaning method, is judged by a number of factors, including the ability to remove soils, the ability to prevent the redeposition of the soils, or, in case of laundry, the ability to maintain the original colours of the washed garment and the ability to maintain fabric or garment durability. The anti-harshening or softening effect of cellulase on fabrics and the fabric care (colour care/colour clarification) effect is known, e.g. from GB 1 368 599 and EP 269 168, along with other very beneficial cellulolytic effects such as particulate soil removal and de-pilling.

Fabric conditioning or fabric softener compositions, in particular compositions to be used in the rinse cycle of laundry washing processes, are also well known. Typically, such compositions contain a water-insoluble quaternary-ammonium fabric softening agent, the most commonly used having been di-long alkyl chain ammonium chloride. Fabric conditioning compositions comprising cellulase have also been suggested, e.g. in US 5,445,747, in particular compositions using a specific ⁻43kD cellulase obtained from the fungus *Humicola insolens*.

Cellulose is a polymer of glucose linked by β-1,4-glucosidic bonds. Cellulose chains form numerous intra- and intermolecular hydrogen bonds, which result in the formation of insoluble cellulose microfibrils. Microbial hydrolysis of cellulose to glucose involves the following three major classes of

cellulases: endo-1,4-β-glucanas s (EC 3.2.1.4), which cleave β-
1,4-glucosidic links randomly throughout cellulose molecules;
cellobiohydrolases (EC 3.2.1.91)(exoglucanases), which digest
cellulose from the nonreducing end; and β-glucosidases (EC
5 3.2.1.21), which hydrolyse cellobiose and low-molecular-mass
cellodextrins to release glucose. Most cellulases consist of a
cellulose-binding domain (CBD) and a catalytic core or catalytic
domain (CAD = catalytically active domain) separated by a linker
rich in proline and hydroxy amino acid residues. All cellulases
10 hydrolyse by either a "retaining" or "inverting" mechanism.

Cellulases are produced by many microorganisms and are of-
ten present in multiple forms. Recognition of the economic sig-
nificance of the enzymatic degradation of cellulose has promoted
an extensive search for industrially useful microbial cellu-
15 lases. As a result, the enzymatic properties and the primary
structures of a large number of cellulases have been investi-
gated. On the basis of the results of a hydrophobic cluster
analysis of the amino acid sequence of the catalytically active
domain (CAD), these cellulases have been placed into 11 differ-
20 ent families of glycosyl hydrolases (Henrissat, 1991; Henrissat
et al., 1993). One of these families is known as the cellulase
family B or as the glycosyl hydrolase family 6. Up till now, the
following enzymes have been identified as belonging to this fam-
ily: *Agaricus bisporus* exoglucanase 3 (cel3), *Cellulomonas fimi*
25 endoglucanase A (cenA), *Cellulomonas fimi* exoglucanase A (cbhA),
Microspora bispora endoglucanase A (celA), *Streptomyces halste-
dii* endoglucanase A (celA), *Streptomyces* strain KSM-9 endogluca-
nase 1 (casA), *Thermomonospora fusca* endoglucanase E-2 (celB),
Trichoderma reesei exoglucanase II (cbh2), and probably *Neocal-
30 limastix patriciarum* exoglucanase (celA) (Denman et al., 1996)
and *Orpinomyces sp.* (celA). The following two conserved regions
have been used as signature patterns (PROSITE: PDOC00563. Febru-
ary 1997): V-x-Y-x(2)-P-x-R-D-C-[GSAF]-x(2)-[GSA](2)-x-G; and
[LIVMYA]-[LIVA]-[LIVT]-[LIV]-E-P-D-[SAL]-[LI]-[PSAG]. The first
35 conserved region contains a conserved aspartic acid residue
which is potentially involved in the catalytic mechanism; the
aspartate is followed by a cysteine which is involved in a di-

sulfide bond. The second conserved region contains an aspartate which seems to be the proton donor in the catalytic mechanism.

WO 97/20025 and WO 97/20026 discloses detergent compositions comprising an endoglucanase from *Thermomonospora fusca*.

5   An interesting feature of family 6 is that it contains both endoglucanases and exoglucanases which show definite differences in amino acid sequence, the exoglucanases having extra amino acid insertions. Without being bound to this theory it is presently believed that cellulolytic enzymes belonging to family

10   6 are inverting type enzymes, i.e. hydrolyse the β-1,4-glucosidic bond with inversion of anomeric configuration. The inverting mechanism involves protonation of the glycosidic oxygen of the scissile bond by an acidic amino acid residue (general acid catalyst) with concerted attack of a water mole-

15   cule at the anomeric carbon. The nucleophilicity of this water molecule is greatly increased through deprotonation by a basic amino acid residue (general basic catalyst). The partial positive charge formed at the anomeric carbon in the transition state is stabilised through resonance with the ring oxygen. This

20   gives the transition state significant oxocarbonium ion character which is stabilised by electrostatic interactions with the nearby carboxylate side chains and by specific binding interactions with the sugar in its half-chair conformation. In general, only glutamate and aspartate residues act directly as general

25   acid or base catalysts in glycosidases (Damude et. al. 1996).

Detergent compositions with cellulases, either monocomponent endoglucanases or cellulase enzyme systems, i.e. a mixture of cellulases, have successfully been used commercially for some years. However, these compositions are neither recommendable for

30   use in a presoaking bath nor for use in case of prolonged storage of the washed and rinsed wet laundry, e.g. in the washing machine prior to line or tumbler drying, since such prolonged enzymatic impact may result in a weakening of the fabric or garment presumably due to the actual (but unknown) mechanisms by

35   which the cellulase types hitherto used in cleaning compositions have acted on the cellulose-containing or cellulosic fabric.

Thus, it is an obj ct of the present invention to provide cleaning compositions containing enzymes with cellulolytic ac-

tivity which enzymes provides colour clarification (colour care benefits) and possibly also soil removal of the laundry without any substantial weakening thereof when the laundry is subjected to pre-soaking or wet storage.

5

SUMMARY OF THE INVENTION

We have now found that endo-1,4-β-glucanases of the glycosyl hydrolase family 6 may valuably be incorporated into cleaning compositions at such a level that at least about 25% of the

10 total weight of cellulolytic active enzyme protein present in the composition derives from the family 6 endoglucanase. The inclusion of such enzymes provides colour care benefits, i.e. colour clarification of laundry containing cotton or other cellulosic fabrics. It is known that such colour care benefit is also

15 provided by endo-1,4-β-glucanases of the glycosyl hydrolase families 5, 7, 45, and 12. However, we now have surprisingly found that, in contrast to endoglucanases belonging to other families, application of family 6 endoglucanases in cleaning compositions delivers an important improvement in the degree of

20 fabric durability, i.e. a considerable reduction in fabric weakening due to subjecting the laundry to a pre-soaking bath or prolonged wet storage of the washed or rinsed laundry within the washing machine.

Accordingly, in a first aspect the present invention re-

25 lates to cleaning compositions comprising one or more enzymes having cellulolytic activity wherein at least 25% of the total weight of cellulolytic active enzyme protein derives from the presence of a *Humicola* endo-1,4-β-glucanase or *Humicola*-like cellulase (endo-type (Cel6B) or exo-type (Cel6A))of the glycosyl

30 hydrolase family 6, the *Humicola*-like cellulase being an enzyme comprising a catalytically core domain having an amino acid sequence being at least 35% homologous to the appended SEQ ID NO:4.

By using the present invention, it is now possible to use

35 high performance cleaning compositions in any cleaning or laundering method without a substantial, negative impact on fabric durability.

In second and third aspects, the invention provides a
method of constructing a variant of a parent *Humicola* family 6 en-
do-beta-1,4-glucanase or a *Humicola*-like family 6 cellulase which
variant has endo-beta-1,4-glucanase activity and improved deter-
5 gent compability as compared to the parent endo-beta-1,4-glucanase
or cellulase; and variants provided by the method.

By using the protein engineering method of the invention it
is now possible to provide well-performing endoglucanases from en-
zymatic starting material originally having different activities
10 and/or different properties, eg can a cellobiohydrolase enzyme
with poor detergent compability be engineered into a well-
performing endoglucanase enzyme based on the findings disclosed
herein.

15 THE DRAWINGS
In the accompanying drawings,

Fig. 1 shows ClustalW multiple sequence alignment of Fami-
ly 6 cellulases. The !SS_HI_CEL6B row shows the definition of α-
helical (H) and β-strand (S) regions.

20   Fig. 2 shows the nucleotide sequence of pCA6H from BamHI-
XbaI; the translational initiation codon is underlined (see e-
xample 3).

Fig. 3 shows the nucleotide sequence of pC6H from BamHI-
XbaI, the translational initiation codon is underlined (see e-
25 xample 3).

Figure 4: Secondary structure elements (strand and helix
only) of catalytic core domain of *Humicola insolens* Cel6B as de-
termined by DSSP for the two independent molecules in the asym-
metric unit. (H) α-helix, (3) 3-10-helix, (S) β-strand.

30   Figure 5: The loop regions encompassing the binding cleft
in the catalytic core region of *Humicola insolens* Cel6B. (L) in-
dicate the defined loop regions encompassing the binding cleft,

(H) α-helical structure in both molecules, (S) β-strand regions
in both molecules.

35   Fig. 6 shows the loop regions encompassing the binding
cleft in *Humicola insolens* Cel6A as determined from sequence
alignment to *Humicola insolens* EGIV (Cel6B). The numbering re-
fers to the mature full length protein.

Fig. 7 shows the loop regions encompassing the binding cleft in *Humicola insolens* Cel6A as determined from analysis of X-ray structure.

Fig. 8: Residues on the surface of *Humicola insolens* Cel6B catalytic core domain and *Neocallimastix patriciarum* catalytic core domain (Q12646) are shown in bold and underline (see example 6).

Figure 9: Residues on the surface of *Humicola insolens* Cel6B catalytic core domain and *Orpinomyces sp.* CelA catalytic core domain (P78720) are shown in bold and underline (see example 6).

Figure 10: Residues on the surface of *Humicola insolens* Cel6B catalytic core domain and *Orpinomyces sp.* CelC catalytic core domain (P78721) are shown in bold and underline (see example 6).

In addition to the drawings, the present specification contains two appendices:

Appendix 1 shows the structural coordinates of *Humicola insolens* EG VI (Cel6B) endo-beta-1,4-glucanase.

Appendix 2 shows the structural coordinates of *Humicola insolens* Cel6A cellulase.

DETAILED DESCRIPTION OF THE INVENTION
Cellulase Numbering

In the context of this invention a specific numbering of amino acid residue positions in cellulolytic enzymes is employed. By aligning the amino acid sequences of known cellulases, as in figure 1 below, it is possible to unambiguously allot an amino acid position number to any amino acid residue in any cellulolytic enzyme, if its amino acid sequence is known.

In figure 1 a number of selected amino acid sequences of cellulases of different microbial origin are aligned.

Using the numbering system originating from the amino acid sequence of the cellulase (endo-β-1,4-glucanase EG VI) obtained from the strain of *Humicola insolens*, DSM 1800, disclosed in e.g. Fig.1, aligned with the amino acid sequence of a number of

other cellulases, it is possible to indicate the position of an amino acid residue in a cellulolytic enzyme unambiguously.

In describing the various cellulase variants produced or contemplated according to the invention, the following nomen-
5 clatures are adapted for ease of reference:

[Original amino acid; Position; Substituted amino acid]

Accordingly, the substitution of glutamine with histidine in position 119 is designated as Q119H.

Amino acid residues which represent insertions in relation
10 to the amino acid sequence of the cellulase from *Humicola insolens*, are numbered by the addition of letters in alphabetical order to the preceding cellulase number, such as e.g. position *21aV for the "inserted" valine (V), where no amino acid residue is present, between lysine at position 21 and
15 alanine at position 22 of the amino acid sequence of the cellulase from *Humicola insolens*, cf. Table 1.

Deletion of a proline (P) at position 49 in the amino acid sequence of the cellulase from *Humicola insolens* is indicated as P49*.

20   Multiple mutations are separated by slash marks ("/"), e.g. Q119H/Q146R, representing mutations in positions 119 and 146 substituting glutamine (Q) with histidine (H), and glutamine (Q) acid with arginine (R), respectively.

If a substitution is made by mutation in e.g. a cellulase
25 derived from a strain of *Humicola insolens*, the product is designated e.g. "*Humicola insolens*/*49P".

All positions referred to in this application by cellulase numbering refer, unless otherwise stated, to the cellulase num-bers described above, and are determined relative to the amino
30 acid sequence of the cellulase derived from *Humicola insolens* Cel6B.

Definitions

In the specification and claims, the term "endoglucanase" is intended to denote enzymes with cellulolytic activity, espe-
35 cially endo-1,4-β-glucanase activity, which are classified in EC 3.2.1.4 according to the Enzyme Nomenclature (1992) and are ca-pable of catalysing (endo)hydrolysis of 1,4-β-D-glucosidic link-

ages in cellulose, lichenin and cereal β-D-glucans including
1,4-linkages in β-D-glucans also containing 1,3-linkages.

In the present context, the term "inverting type endoglu-
canase" means an endo-β-1,4-glucanase which hydrolyses the gly-
5 cosidic bond with net inversion of anomeric configuration, i.e.
which operate via a direct displacement of the leaving group by
water: one residue acts as a general acid and the other as a
general base.

In the present context, the term "retaining type endoglu-
10 canase" means an endo-β-1,4-glucanase" which hydrolyses the gly-
cosidic bond with net retention of anomeric configuration, i.e.
which utilizes a double-displacement mechanism involving a gly-
cosyl-enzyme intermediate: one residue functions as general acid
and general base while the other acts as a nucleophile and leav-
15 ing group (McCarter et al., 1994).

The enzyme

In a preferred embodiment of the present invention, the
cleaning composition comprises a *Humicola* endo-1,4-β-glucanase
20 or *Humicola*-like cellulase of the glycosyl hydrolase family 6 in
an amount corresponding to at least 25%, preferably at least
30%, more preferably at least 40%, even more preferably at least
90%, especially at least 98%, of the total weight of enzyme pro-
tein having cellulolytic activity.
25   In the present context, the term "*Humicola*-like cellulase"
denotes an endoglucanase or an exoglucanase (cellobiohydrolase)
comprising a catalytically core domain which has an amino acid
sequence being at least 35% homologous to SEQ ID NO:4. This is
explained in further detail below.
30   It is believed that no naturally occurring microorganism
is capable of producing a cellulase complex comprising a family
6 endoglucanase in an amount of at least 25% by weight of the
total amount of enzyme protein having cellulolytic activity. Ac-
cordingly, family 6 endoglucanase will usually be present in a
35 mixture of other enzymes having cellulolytic activity. This mix-
ture may either be a conventional fermentation product, possibly
isolated and purified, from a single species of a microorganism.

Besides family 6 endoglucanase, examples of other cellulolytic
enzymes usually present in a fungal cellulolytic mixture, i.e. a
cellulase complex produced by a fungal species, are endo-1,4-β-
glucanases of the glycosyl hydrolase families 5, 7, 12, or 45;
5   and examples of other cellulolytic enzymes usually present in a
bacterial cellulolytic mixture, i.e. a cellulase complex pro-
duced by a bacterial species, are endo-1,4-β-glucanases of the
glycosyl hydrolase families 5, 8, 9, 12, 41, 45 or 48. The mix-
ture may also be a mixture of monocomponent enzymes, preferably
10 enzymes derived from bacterial or fungal species by using con-
ventional recombinant techniques, which enzymes have been fer-
mented and possibly isolated and purified separately and which
may originate from different species, preferably fungal or bac-
terial species. The mixture may also be the fermentation product
15 of a microorganism which acts as a host cell for expression of a
recombinant endoglucanase, e.g. a family 6 endoglucanase, but
which microorganism simultaneously produces other cellulases be-
ing naturally occurring fermentation products of the microorgan-
ism, i.e. the cellulase complex conventionally produced by the
20 corresponding naturally occurring microorganism. Examples of
useful recombinantly producible endo-1,4-β-glucanases of the
glycosyl hydrolase family 45 are disclosed e.g. in WO91/17243,
WO94/07998, and WO96/29397 which are hereby incorporated by ref-
erence. Examples of other useful endo-1,4-β-glucanases of the
25 glycosyl hydrolase families 5, 7, 8, 9, 12, 41 and 48 are dis-
closed e.g. in Henrissat, 1991, and in Henrissat et al, 1993,
which are hereby incorporated by reference.

        In another preferred embodiment, essentially all cellu-
lolytic activity present in the composition of the invention re-
30 sults from one single enzyme component, i.e. a monocomponent
endo-1,4-β-glucanase of the glycosyl hydrolase family 6. Exam-
ples of endo-1,4-β-glucanases of the glycosyl hydrolase family 6
are those derived from the species *Humicola insolens* (eg EG VI
also denoted Cel6B), *Neocallimastix patriciarum, Orpinomyces sp.*
35 Further, it is comtemplated that the species *Trichoderma reesei*
and *Fusarium oxysporum* produces enzymes which are suitable as
starting material for the protein engineering method by which

well-performing family 6 endoglucanase variants can be con-
structed.

In general, the family 6 endo-1,4-β-glucanase may be pres-
ent in the cleaning composition of the present invention in an
5 amount corresponding to from about 1 ECU to about 100000 ECU per
liter washing or rinsing solution.

Preferably, the family 6 endo-1,4-β-glucanase, either na-
tive or variant, comprises one or two cellulose-binding domains
(CBD) operably linked to the catalytic domain.

10 A cellulose binding domain (CBD) is a polypeptide which
has high affinity for or binds to water-insoluble forms of
cellulose and chitin, including crystalline forms.

CBDs are found as integral parts of large protein
complexes consisting of two or more different polypeptides, for
15 example in hydrolytic enzymes (hydrolases) which typically are
composed of a catalytic domain containing the active site for
substrate hydrolysis, and a carbohydrate-binding domain or
cellulose-binding domain (CBD) for binding to the insoluble
matrix. Such enzymes can comprise more than one catalytic domain
20 and one, two or three CBDs and optionally one or more
polypeptide regions linking the CBD(s) with the catalytic
domain(s), the latter regions usually being denoted a "linker".
Examples of hydrolytic enzymes comprising a CBD are cellulases,
xylanases, mannanases, arabinofuranosidases, acetyl esterases
25 and chitinases. CBDs have also been found in algae, e.g. the red
alga *Porphyra purpurea* as a non-hydrolytic polysaccharide-
binding protein, see Peter Tomme et al. "Cellulose-Binding
Domains: Classification and Properties" in "Enzymatic
Degradation of Insoluble Carbohydrates", John N. Saddler and
30 Michael H. Penner (Eds.), ACS Symposium Series, No. 618, 1996.
However, most of the known CBDs are from cellulases and
xylanases.

In this context, the term "cellulose-binding domain" is
intended to be understood as defined by Tomme et al., *op. cit.*
35 This definition classifies more than 120 cellulose-binding
domains into 10 families (I-X) which may have different
functions or roles in connection with the mechanism of substrate
binding. However, it is anticipated that new family

representatives and additional CBD famili s will appear in the future.

In the protein complex, typically a hydrolytic enzyme, a CBD is located at the N or C termini or is internal.

5   A monomeric CBD typically consists of more than about 30 and less than about 250 amino acid residues. For example, a CBD classified in Family I consists of 33-37 amino acid residues; a CBD classified in Family IIa consists of 95-108 amino acid residues; and a CBD classified in Family VI consists of 85-92

10   amino acid residues. Accordingly, the molecular weight of a monomeric CBD will typically be in the range of from about 4kD to about 40kD, and usually below about 35kD.

CBDs may be useful as a single domain polypeptide or as a dimer, a trimer, or a polymer; or as a part of a protein hybrid.

15   Chimeric protein hybrids are known in the art, see e.g. WO 90/00609, WO 94/24158 and WO 95/16782, and comprise a cellulose binding domain (CBD) from another origin, preferably from another microbial origin, than the chimeric protein as such, which CBD exists as an integral part of the protein. Typically,

20   the chimeric protein hybrids are enzyme hybrids, i.e. contain a catalytic domain together with the binding domain.

Chimaric protein hybrids and enzyme hybrids can be prepared by transforming into a host cell a DNA construct comprising at least a fragment of DNA encoding the cellulose-

25   binding domain (CBD) ligated, with or without a linker, to a DNA sequence encoding the protein or enzyme and growing the host cell to express the fused gene. The recombinant fusion protein or enzyme hybrids may be described by the following formula:

30   CBD - MR - X

wherein CBD is the N-terminal or the C-terminal region of an amino acid sequence corresponding to at least the cellulose-binding domain; MR is the middle region (the linker), and may be

35   a bond, or a short linking group preferably of from about 2 to about 100 carbon atoms, more preferably of from 2 to 40 carbon atoms; or is preferably from about 2 to to about 100 amino acids, more preferably of from 2 to 40 amino acids; and X is an

N-terminal or C-terminal region of a polypeptide encoded by the
DNA sequence encoding the protein or enzyme.

However, recombinant fusion protein or enzyme hybrids hav-
ing an internal CBD are also contemplated.

The method of constructing enzyme variants and the variants

In a preferred embodiment, the invention provides a method
of constructing a variant of a parent *Humicola* family 6 endo-beta-
1,4-glucanase, which variant has endo-beta-1,4-glucanase activity
and improved detergent compability as compared to the parent endo-
beta-1,4-glucanase, which method comprises i) analysing the
structure of the parent *Humicola* family 6 endo-beta-1,4-glucanase
to identify at least one amino acid residue or at least one
structural part of the *Humicola* family 6 endo-beta-1,4-glucanase
catalytically core domain structure, which amino acid residue or
structural part is believed to be of relevance for altering the
detergent compatibility of the parent *Humicola* family 6 endo-beta-
1,4-glucanase as evaluated on the basis of structural or
functional considerations, ii) constructing a *Humicola* family 6
endo-beta-1,4-glucanase variant, which as compared to the parent
Humicola family 6 endo-beta-1,4-glucanase has been modified in the
amino acid residue or structural part identified in i) so as to
alter the detergent compatibility, and, optionally, iii) testing
the resulting *Humicola* family 6 endo-beta-1,4-glucanase variant
with respect to detergent compatibility.

Preferably, the structural part to be modified is the bin-
ding cleft, the loop region encompassing the binding cleft, or the
side chain of the catalytic acid Asp139.

In another preferred embodiment, the invention provides a
method of constructing a variant of a parent *Humicola*-like family
6 cellulase, which variant has endo-beta-1,4-glucanase activity
and improved detergent compatibility as compared to the parent
cellulase, which method comprises i) comparing the three-
dimensional structure of the *Humicola* endo-beta-1,4-glucanase with
the structure of a *Humicola*-like cellulase, ii) identifying a part
of the *Humicola*-like cellulase structure which is different from
the *Humicola* endo-beta-1,4-glucanase structure and which from
structural or functional considerations is contemplated to be
responsible for differences in the detergent compatibility of the

Humicola endo-b ta-1,4-glucanase and *Humicola*-like cellulase, iii)
modifying the part of the *Humicola*-like cellulase identified in
ii) whereby a *Humicola*-like endo-beta-1,4-glucanase variant is
obtained, which has an improved detergent compatibility compared
5 to the parent *Humicola*-like cellulase, and optionally, iv) testing
the resulting *Humicola*-like endo-beta-1,4-glucanase variant with
respect to detergent compatibility.

Preferably, the part of the *Humicola*-like cellulase is
modified so as to resemble the corresponding part of the *Humicola*
10 family 6 endo-beta-1,4-glucanase.

The modification is, in step iii) of the method, accomplished
by deleting one or more amino acid residues of the part of the
Humicola-like cellulase to be modified; or the modification is
accomplished by replacing one or more amino acid residues of the
15 part of the *Humicola*-like cellulase to be modified with the amino
acid residues occupying corresponding positions in the *Humicola*
endo-beta-1,4-glucanase; or the modification is accomplished by
insertion of one or more amino acid residues present in the
Humicola endo-beta-1,4-glucanase into a corresponding position in
20 the *Humicola*-like cellulase.

In a preferred embodiment, the parent *Humicola* endo-beta-
1,4-glucanase is derived from a strain of *Humicola insolens*, more
preferably from the strain *Humicola insolens,* DSM 1800.

By the term "improved detergent compability" as used herein
25 is meant improved properties of the enzyme with respect to
enzymatic activity and stability in commercial detergent
compositions. More specifically, these improved properties are
improved enzymatic performance or enzymatic activity at a high pH,
preferably at a pH above 8, more preferably above 9, especially at
30 a pH about or above 10; improved stability towards conventional
commercial detergent composition ingredients such as anionic or
non-ionic surfactants, cf. examples 4-7; improved thermal
stability; and improved resistance to oxidation (ie improved
compatibility towards conventional detergent composition
35 ingredients such as bleaching agents).

The three-dimensional structure of *Humicola insolens* Cel6B (EG
VI) catalytic core domain

The three-dimensional structure of the catalytic core do-
main of the *Humicola insolens* Cel6B fungal cellulase was solved
by X-ray crystallographic methods. The extent of the catalytic
core domain used for the experiment was the 347 amino acid resi-
5 dues starting from position 27 of SEQ ID NO:4 (and including po-
sition 373 of SEQ ID NO:4).

The obtained three-dimensional structure is believed to be
representative for the structure of the any fungal endoglucanase
catalytic core domain belonging to family 6 of glycosyl hydrola-
10 ses (Henrissat B. "A classification of glycosyl hydrolases based
on amino-acid sequence similarities." Biochem. J. 280 309-316
(1991). Henrissat B., Bairoch A. "New families in the classifi-
cation of glycosyl hydrolases based on amino-acid sequence simi-
larities. Biochem. J. 293 781-788 (1993). Henrissat B., Bairoch
15 A. "Updating the sequence-based classification of glycosyl hy-
drolases." Biochem. J. 316 695-696 (1996).Davies G., Henrissat
B. "Structures and mechanisms of glycosyl hydrolases." Structure
3 853-859 (1995)).

The structure was solved in accordance with the principles
20 for X-ray crystallographic methods given in "X-Ray Structure De-
termination", Stout, G.K. and Jensen, L.H., John Wiley and Sons,
Inc. N.Y. 1989. The structural coordinates of the catalytic core
domain of the *Humicola insolens* Cel6B fungal cellulase solved at
1.6Å resolution are given in Appendix 1 in a conventional Brook-
25 haven Protein Data Bank (PDB) format (E. E. Abola, F. C. Bern-
stein, S. H. Bryant, T. F. Koetzle, and J. Weng, Protein Data
Bank, in Crystallographic Databases-Information Content, Soft-
ware Systems, Scientific Applications, F. H. Allen, G. Berger-
hoff, and R. Sievers, eds., Data Commission of the International
30 Union of Crystallography, Bonn/Cambridge/Chester (1987) pp. 107-
132. ; F. C. Bernstein, T. F. Koetzle, G. J. B. Williams, E. F.
Meyer, Jr., M. D. Brice, J. R. Rodgers, O. Kennard, T. Shimanou-
chi, and M. Tasumi, The Protein Data Bank: a Computer-based Ar-
chival File for Macromolecular Structures, J. Mol. Biol. 112,
35 535-542 (1977); http://www.pdb.bnl.gov/).

The structure contains two independent molecules in the
asymmetric unit identified by the letters A and B respectively.
Only the part from residue G3 to A347 are detectable in the X-
ray structure. It is thought that the remaining residues are

disordered under these crystallization and data collection con-
ditions and therefore not detectable in the X-ray structure. It
is to be understood that Appendix 1 forms part of the present
application.

5   The structure of the catalytic core domain of the *Humicola
insolens Cel6B fungal cellulase exhibits the distorted barrel
topology first described for a family 6 glycoside hydrolase by
the *Trichoderma reesei* CBHII structure (J.Rouvinen *et.al.*
"Three-dimensional structure of cellobiohydrolase from Thricho-
10 derma reesei" *Science* **249**, p380-386 (1990)). The catalytic Brøn-
sted acid (D139) and the catalytic base (D316) are located on e-
ach side of a cleft at a distance of 9.12Å and 9.64Å for the two
independent molecules respectively consistent with the catalytic
mechanism occurring with inversion of the anomeric configurati-
15 on. A third acidic residue (D180) is located close to the Brøn-
sted acid having the effect of stabilizing the protonated form
of the D139 thereby making the enzyme active even at alkaline
conditions.

       The secondary structure of the core domain of the *Humicola
*20 *insolens* Cel6B fungal cellulase as determined by the DSSP pro-
gram (W.Kabsch & C.Sander, *Dictionary of protein secondary
structure: pattern recognition of hydrogen bond and geometrical
features*. Biopolymers **22**, 2577-2637 (1983)) is shown in figure
4.

25   The three-dimensional structure of the catalytic core do-
main of the *Humicola insolens* Cel6A cellulase was solved by X-
ray crystallographic methods as described above and is shown in
Appendix 2.

30 <u>Definition of the binding cleft of a three-dimensional structure</u>
   <u>of an enzyme belonging to Family 6 of glycosyl hydrolases:</u>
       A binding cleft is defined as consisting of the largest ca-
ve (pocket) on the surface of an enzyme and can extend beyond
this pocket.

35   Using WHAT IF (G.Vriend, *WHAT IF: a molecular modelling and
drug design program. J.Mol.Graph. **8**, 52-56, (1990) version
19980317-1938) applying the AACAVI command of the MAP menu with
a *PROBE RADIUS* of 1.4 Å the residues on the surface of the lar-
gest cave (pocket) can be detected.

The binding cleft in contact with the substrate can con-
sist of more residues than those in the concave cleft detected
above. Those can be detected by visual inspection of the three-
dimensional structure e.g. using the program *InsightII* (© 1996,
5 Molecular Simulations Incorporated) finding surface exposed re-
sidues extending from the concave cleft defined above. Surface
exposure are detected either by the DSSP program (se below) or
by the *Surface Molecule* command of InsightII.

10 <u>Definition of the binding cleft of the catalytic core domain of</u>
<u>*Humicola insolens* Cel6B.</u>

Applying the method to the three-dimensional structure of
the catalytic core domain of *Humicola insolens* Cel6B the concave
part of the binding cleft as detected by WHAT IF is defined as
15 comprising of the following residues: W52, S54, Y86, D92, P138,
D139, D180, A182, N183, W186, N219, V220, S221, N222, W282,
K310, P311, E314, S315, D316, A327 and G328.

By visual inspection using *InsightII* the complete binding
cleft is defined as comprising of the following residues: N14,
20 D16, K20, Y51, W52, S54, L58, Y86, R91, D92, P138, D139, D180,
A182, N183, G185, W186, W189, N219, V220, S221, N222, W279,
W282, K310, P311, E314, D316, A327 and G328.

<u>The loop regions encompassing the binding cleft:</u>
25   Given the binding cleft as described above, the loop regi-
ons encompassing the binding cleft is defined as the regions of
contiguous sequence not belonging to a α-helical region or a β-
strand region in any of the determined structures. In this defi-
nition the 3-10 helices are included in the loop definition as
30 they are not seen as an integral part of the inner core structu-
re. Using this definition together with the secondary structure
information in figure 4 the binding cleft encompassing loops are
defined as: L12, V13, N14, S54, N55, I56, F57, L58, L59, Y86,
N87, L88, P89, D90, R91, D92, C93, S94, A95, G96, E97, S98, S99,
35 G100, E101, L102, K103, L104, S105, Q106, N107, E137, P138,
D139, V181, A182, N183, G188, W189, A190, D191, K192, N219,
V220, S221, N222, Y223, N224, P225, Y226, S227, T228, S229,
N230, P231, P232, P233, Y234, T235, S236, G237, S238, P239,

```
   S240,  P241,  D242,  A271,  L272,  S273,  G274,  A275,  R276,  S277,
   E278,  W279,  G280,  Q281,  W282,  C283,  N284,  V285,  N286,  P287,
   W308,  V309,  K310,  P311,  G312,  G313,  E314,  S315,  D316,  G317,
   Q318,  C319,  G320,  M321,  G322,  G323,  A324,  P325,  A326,  A327,
 5 G328,  M329,  W330,  F331.
```

This can be seen graphically in figure 5.

Residues in proximity:

To detect residues in proximity of each other the *Subset*
10 *zone* command of the InsightII program is applied. The command
detects residues or individual atoms within a defined distance
from a predefined subset, groups of residues or groups of atoms.
The *Subset list* command can be used to investigate the result.

15 Residues within 5 Å of residues in the binding cleft:

Based on the above definition of the binding cleft the fol-
lowing residues are within 5 Å of the residues in the binding
cleft (including the residues in the binding cleft): L12, V13,
N14, S15, D16, Y17, S18, S19, K20, L21, D22, Q23, T24, V47, G48,
20 T49, F50, Y51, W52, I53, S54, N55, I56, F57, L58, L59, R60, D61,
I62, V64, A65, N68, V81, G82, L83, V84, L85, Y86, N87, L88, P89,
D90, R91, D92, C93, S94, A95, G96, E97, S98, S99, G100, L102,
Y116, I135, L136, E137, P138, D139, A140, I141, G142, N143,
T146, Q159, Y178, L179, D180, V181, A182, N183, G184, G185,
25 W186, L187, G188, W189, A190, D191, K192, L193, S217, S218,
N219, V220, S221, N222, Y223, N224, Y234, T235, S236, G237,
S238, P239, S240, P241, E243, Y246, I265, D266, Q267, S268,
R269, R276, S277, E278, W279, G280, Q281, W282, C283, N284,
V285, W308, V309, K310, P311, G312, G313, E314, S315, D316,
30 G317, Q318, C319, A324, P325, A326, A327, G328, M329, W330,
F331, D332.

Residues within 2.5 Å of residues in the binding cleft:

Based on the above definition of the binding cleft the
35 following residues are within 2.5 Å of the residues in the bin-
ding cleft (including the residues in the binding cleft): V13,
N14, S15, D16, Y17, S19, K20, L21, F50, Y51, W52, I53, S54, N55,
F57, L58, L59, L85, Y86, N87, D90, R91, D92, C93, E137, P138,
D139, A140, L179, D180, V181, A182, N183, G184, G185, W186,

L187, G188, W189, A190, S218, N219, V220, S221, N222, Y223,
E278, W279, G280, Q281, W282, C283, V309, K310, P311, G312,
G313, E314, S315, D316, A326, A327, G328, M329.

<u>Residues within 15.0 Å of D139 side chain in the three-
dimensional structure of _Humicola insolens_ Cel6B catalytic core
domain:</u>

The following residues are found to be within 15.0 Å of an
atom in the side chain of the catalytic acid (D139) defined as
any of the atoms CB, CG, OD1 or OD2 in one of the two indepen-
dent structures in the three-dimensional structure of _Humicola
insolens_ Cel6B catalytic core domain: F50, W52, I53, S54, L83,
V84, L85, Y86, N87, L88, P89, D90, R91, D92, C93, S94, A95, G96,
E97, S98, S99, G100, E101, L102, Y112, Y116, V134, I135, L136,
E137, P138, D139, A140, I141, G142, N143, M144, V145, T146,
G147, T148, S149, F151, C152, R153, A155, R156, P158, Q159,
Q160, A162, I163, Y178, L179, D180, V181, A182, N183, G184,
G185, W186, L187, G188, W189, K192, L193, P195, T196, A197,
E199, V200, I203, G215, F216, S217, S218, N219, V220, S221,
N222, Y223, N224, P225, Y234, S240, D242, E243, Y246, A247,
I250, M254, Q262, F263, I264, I265, D266, Q267, S268, R269,
R276, E278, W279, G280, Q281, W282, C283, N284, V285, V307,
W308, V309, K310, P311, G312, E314, S315, D316, G317, Q318,
C319, A327, G328, Y334.

<u>Residues within 10.0 Å of D139 side chain in the three-
dimensional structure of _Humicola insolens_ Cel6B catalytic core
domain:</u>

The following residues are found to be within 10.0 Å of an
atom in the side chain of the catalytic acid (D139) defined as
any of the atoms CB, CG, OD1 or OD2 in one of the two indepen-
dent structures in the three-dimensional structure of _Humicola
insolens_ Cel6B catalytic core domain: W52, V84, L85, Y86, L88,
D90, R91, D92, C93, S94, A95, S99, I135, L136, E137, P138, D139,
A140, I141, G142, N143, M144, V145, T146, C152, Q159, I163,
L179, D180, V181, A182, N183, G184, G185, W186, L187, S217,
S218, N219, V220, S221, N222, Y223, N224, E243, Y246, D266,
R269, G280, Q281, W282, C283, K310, D316.

<u>Residues within 5.0 Å of D139 side chain in the three-</u>
<u>dimensional structure of *Humicola insolens* Cel6B catalytic core</u>
<u>domain:</u>

5   The following residues are found to be within 5.0 Å of an
atom in the side chain of the catalytic acid (D139) defined as
any of the atoms CB, CG, OD1 or OD2 in one of the two indepen-
dent structures in the three-dimensional structure of *Humicola*
insolens Cel6B catalytic core domain: D92, P138, D139, A140,

10   N143, D180, A182, W186.

<u>Residues on the surface of the molecule:</u>

    Residues on the surface of the three-dimensional structure
of a molecule is defined as those having any part of their sur-

15   face exposed to the solvent as calculated by the DSSP program
(W.Kabsch & C.Sander, *Dictionary of protein secondary structure:*
pattern recognition of hydrogen bond and geometrical features.
Biopolymers **22**, 2577-2637 (1983)).

    For three-dimensional structure of the catalytic core do-

20   main of the *Humicola insolens* Cel6B fungal cellulase the appli-
cation of the DSSP program to both of the molecules reveiled
that the following residues were defined as being on the surface
of the molecule:

     G3, N4, P5, S7, G8, R9, T10, L11, L12, V13, N14, S15, D16, Y17,

25   S18, S19, K20, D22, Q23, R25, Q26, A27, L29, S30, R31, G32, D33,
     Q34, T35, N36, A37, A38, K39, K41, Y42, V43, Q44, E45, K46, V47,
     G48, T49, Y51, W52, S54, N55, I56, F57, L58, L59, R60, D61, D63,
     V64, I66, Q67, N68, A69, R70, A71, A72, K73, A74, R75, G76, E77,
     N78, P79, Y86, L88, D90, R91, D92, C93, S94, A95, G96, E97, S98,

30   S99, G100, E101, L102, K103, L104, S105, Q106, N107, G108, L109,
     N110, R111, Y112, K113, N114, E115, V117, N118, P119, F120,
     A121, Q122, K123, K125, A126, A127, S128, D129, V130, Q131,
     L136, E137, P138, D139, A140, I141, N143, M144, V145, T146,
     G147, T148, S149, A150, F151, C152, R153, N154, R156, G157,

35   P158, Q159, Q160, E161, I163, G164, Y165, A166, S168, Q169,
     L170, Q171, A172, S173, H174, I175, H176, L177, L179, D180,
     A182, N183, G185, W186, W189, A190, D191, K192, L193, E194,
     P195, Q198, E199, A201, T202, L204, Q205, K206, A207, G208,
     N209, N210, A211, K212, I213, R214, S217, N219, V220, S221,

N222, N224, P225, Y226, S227, T228, S229, N230, P231, P232,
P233, Y234, T235, S236, G237, S238, P239, P241, D242, S244,
R245, T248, N249, N252, A253, R255, Q256, R257, G258, L259,
P260, T261, Q262, I264, D266, Q267, S268, V270, A271, L272,
5   S273, G274, A275, R276, S277, E278, W279, G280, Q281, W282,
C283, V285, N286, P287, G289, F290, G291, Q292, P293, F294,
T295, T296, N297, T298, N299, N300, P301, N302, V303, D304,
I306, V309, K310, P311, E314, D316, G317, Q318, C319, G320,
M321, G322, G323, A324, P325, A326, A327, G328, M329, W330,
10 F331, D332, A333, Y334, Q336, M337, Q340, N341, A342, H343,
D344, E345, I346.

Residues within 15.0 Å of D139 side chain in the three-
dimensional structure of _Humicola insolens_ Cel6B catalytic core
15 domain and defined as being on the surface:

The following residues are found to be within 15.0 Å of an
atom in the side chain of the catalytic acid (D139) defined as
any of the atoms CB, CG, OD1 or OD2 in one of the two indepen-
dent structures in the three-dimensional structure of _Humicola_
20 _insolens_ Cel6B catalytic core domain and are defined as being on
the surface of the molecule: W52, S54, Y86, L88, D90, R91, D92,
C93, S94, A95, G96, E97, S98, S99, G100, E101, L102, Y112, L136,
E137, P138, D139, A140, I141, N143, M144, V145, T146, G147,
T148, S149, F151, C152, R153, A155, R156, P158, Q159, Q160,
25 I163, L179, D180, A182, N183, G185, W186, W189, K192, L193,
P195, E199, S217, N219, V220, S221, N222, N224, P225, Y234,
D242, Q262, I264, D266, Q267, S268, R276, E278, W279, G280,
Q281, W282, C283, V285, V309, K310, P311, E314, D316, G317,
Q318, C319, A327, G328, Y334.

30

Residues within 10.0 Å of D139 side chain in the three-
dimensional structure of _Humicola insolens_ Cel6B catalytic core
domain and defined as being on the surface:

The following residues are found to be within 10.0 Å of an
35 atom in the side chain of the catalytic acid (D139) defined as
any of the atoms CB, CG, OD1 or OD2 in one of the two indepen-
dent structures in the three-dimensional structure of _Humicola_
insolens Cel6B catalytic core domain and are defined as being on
the surface of the molecule: W52, Y86, L88, D90, R91, D92, C93,

S94, A95, S99, L136, E137, P138, D139, A140, I141, N143, M144,
V145, T146, C152, Q159, I163, L179, D180, A182, N183, G185,
W186, S217, N219, V220, S221, N222, N224, D266, G280, Q281,
W282, C283, K310, D316.

5

Residues within 5.0 Å of D139 side chain in the three-
dimensional structure of _Humicola insolens_ Cel6B catalytic core
domain and defined as being on the surface:

The following residues are found to be within 5.0 Å of an
10 atom in the side chain of the catalytic acid (D139) defined as
any of the atoms CB, CG, OD1 or OD2 in one of the two indepen-
dent structures in the three-dimensional structure of _Humicola
insolens_ Cel6B catalytic core domain and are defined as being on
the surface of the molecule: D92, P138, D139, A140, N143, D180,
15 A182, W186.

Improved Stability Towards Anionic Surfactants

In order so stabilize an enzyme against denaturation by ani-
onic tensides mutations/deletions of surface exposed residues are
20 performed. The mutation is towards a more negatively charged resi-
due, and preferably from a potentially positively charged residue
(His, Lys or Arg, more preferably Arg). These points are thought
to be anchor points for the anionic tensides especially the poten-
tially positively charged residues and more preferably the Argini-
25 ne residues.

The mutations from neutrally charged surface residues to-
wards potentially negatively charged residues (Asp or Glu) should
preferably be performed at points where the sequence holds the e-
quivalent amide (Asn or Gln).
30   Mutating surface exposed residues towards more negatively
charged residues for the core domain of _Humicola insolens_ Cel6B
comprises of the following mutations:

Neutral residues to be mutated to Asp or Glu (excluding
His):

35 G3, N4, P5, S7, G8, T10, L11, L12, V13, N14, S15, Y17, S18, S19,
Q23, Q26, A27, L29, S30, G32, Q34, T35, N36, A37, A38, Y42, V43,
Q44, V47, G48, T49, Y51, W52, S54, N55, I56, F57, L58, L59, V64,
I66, Q67, N68, A69, A71, A72, A74, G76, N78, P79, Y86, L88, C93,
S94, A95, G96, S98, S99, G100, L102, L104, S105, Q106, N107,

G108, L109, N110, Y112, N114, V117, N118, P119, F120, A121,
Q122, A126, A127, S128, V130, Q131, L136, P138, A140, I141,
N143, M144, V145, T146, G147, T148, S149, A150, F151, C152,
N154, G157, P158, Q159, Q160, I163, G164, Y165, A166, S168,
5 Q169, L170, Q171, A172, S173, I175, L177, L179, A182, N183,
G185, W186, W189, A190, L193, P195, Q198, A201, T202, L204,
Q205, A207, G208, N209, N210, A211, I213, S217, N219, V220,
S221, N222, N224, P225, Y226, S227, T228, S229, N230, P231,
P232, P233, Y234, T235, S236, G237, S238, P239, P241, S244,
10 T248, N249, N252, A253, Q256, G258, L259, P260, T261, Q262,
I264, Q267, S268, V270, A271, ·L272, S273, G274, A275, S277,
W279, G280, Q281, W282, C283, V285, N286, P287, G289, F290,
G291, Q292, P293, F294, T295, T296, N297, T298, N299, N300,
P301, N302, V303, I306, V309, P311, G317, Q318, C319, G320,
15 M321, G322, G323, A324, P325, A326, A327, G328, M329, W330,
F331, A333, Y334, Q336, M337, Q340, N341, A342, I346.

Preferably at the points where the sequence already con-
tains Asn or Gln, which in the core domain of *Humicola insolens*
Cel6B comprises residues: N4, N14, Q23, Q26, Q34, N36, Q44, N55,
20 Q67, N68, N78, Q106, N107, N110, N114, N118, Q122, Q131, N143,
N154, Q159, Q160, Q169, Q171, N183, Q198, Q205, N209, N210,
N219, N222, N224, N230, N249, N252, Q256, Q262, Q267, Q281,
N286, Q292, N297, N299, N300, N302, Q318, Q336, Q340, N341.

Preferably mutations should be performed at surface exposed
25 positions containing a potentially positively charged residue
(His, Lys or Arg) mutating to a residue not belonging to this
group. In the core domain of *Humicola insolens* Cel6B this compri-
ses residues: R9, K20, R25, R31, K39, K41, K46, R60, R70, K73,
R75, R91, K103, R111, K113, K123, K125, R153, R156, H174, H176,
30 K192, K206, K212, R214, R245, R255, R257, R276, K310, H343, most
preferably: R9, R25, R31, R60, R70, R75, R91, R111, R153, R156,
R214, R245, R255, R257, R276.

Improved thermal stability

35   A enzyme can be stabilized towards thermal denaturation
can by substitution of a naturally occurring amino acid residue
other than proline with a proline residue at positions in the
structure where the backbone dihedral angle φ (phi) are in the

interval [-90° < φ < -40°] and where the back bone amide proton
of the residue to be substituted does not participate as donor
in a hydrogen bond. Preferably the residue should be outside α-
helical regions as well as β-strand regions. More preferably the
back bone ψ (psi) dihedral angle should be in the intervals: [-
180° < ψ < -150°] or [-80° < ψ < 10°] or [100° < ψ < 180°]. The di-
hedral angles as well as the potential hydrogen bonds involving
the back bone amide proton can be investigated using the program
DSSP. A hydrogen bond involving the back bone amide proton is
defined as those with an energy determined by DSSP smaller than
or equal to -1.4 kcal/mole.

     Applying this method to the three-dimensional structure of
the catalyic core domain of *Humicola insolens* Cel6B rsults in
the following positions as targets for Xxx -> Pro mutations: N4,
S7, L11, V13, N14, S15, D16, Y17, D22, Q23, T24, T35, N36, G48,
S54, I56, F57, L58, R60, D63, A74, L88, R91, C93, S94, S98, S99,
E101, L104, S105, L109, N110, S128, D129, I141, G142, G147,
S149, A150, F151, C152, R156, G157, S173, G184, G185, W189,
A190, D191, L193, E194, N209, N210, A211, V220, N224, Y226,
Y234, R245, Q256, Q262, S268, S273, S277, W279, G280, C283,
V285, Q292, F294, N297, N302, K310, G312, D316, Q318, G322,
A324, A326, A327, D332, A333, Y334, W330, D344, E345, preferably
N4, S7, V13, N14, G48, S54, I56, F57, L58, L88, R91, C93, S94,
S98, S99, E101, L104, S105, S128, D129, G147, S149, S173, W189,
A190, D191, N209, N210, A211, V220, N224, Y226, Y234, S268,
S273, S277, W279, G280, C283, V285, Q292, F294, N297, N302,
K310, G312, D316, Q318, G322, A324, A326, A327, W330, D344,
E345, more preferably N4, S7, V13, N14, G48, S54, I56, F57, L58,
L88, R91, C93, S94, S98, S99, E101, L104, S105, AER128, D129,
S149, S173, W189, A190, D191, N209, N210, A211, V220, N224,
Y226, Y234, S268, S273, S277, W279, G280, C283, V285, Q292,
F294, N302, K310, G312, D316, G322, A324, A326, A327, W330,
D344, E345.

Capping of alpha-helices

     Due to the helix dipole created due to alignment of the
many polar atoms in the backbone an alpha-helix exhibits a dipo-

le with a partial positive charge at the N-terminus and a par-
tial negative charge at the C-terminus. This dipole can be fur-
ther stabilized by introduction of opposite charges or partial
charges at the ends or removal of equal charges or partial char-
5   ges. The most well know example is the N-capping of the N-
terminal of the alpha Helix with a Asn residue which can satisfy
a hydrogen bond donor in the back bone which would else be un-
paired. Alternatively an Asp residue located at the N-terminal
can counteract the partial positive charge and stabilize the en-
10 zyme structure. From a structural analysis other substitutions
can be found which will place a residue close to a helix termi-
nal with a stabilizing charge or partial charge.

      Examination of the tree-dimensional structure of *Humicola
insolens* Cel6B catalytic core domain results in the following
15 potentially stabilizing mutations in the N-terminal regions of
the alpha helices: N14D ; N55D ; S149N,D ; N183D ; K192Q ;
F331N,D.

      And the following potentially stabilizing mutations in the
C-terminal regions of the alpha-helices: V13K,R ; E77Q ;
20 S128N,Q,K,R ; T148N,Q,K,R ; S168N,Q,K,R ; L193Q ; D344N,Q,K,R.

<u>Satisfaction of internal hydrogen bonds and salt bridges</u>
      "Unsatisfied" hydrogen bond donors and/or acceptors as
well as unpaired buried charged groups from potentially charged
25 residues can destabilize an enzyme structure. Removing the unsa-
tisfied partner by mutagenesis to a residue without these pro-
perties or mutation of neighboring residues to fulfill the unsa-
tisfied hydrogen bond or salt bridge can most often stabilize
the enzyme structure. These unsatisfied hydrogen bond/salt
30 bridge partners can be found using the *WHAT CHECK* routine which
is an integral part of the *WHAT IF* program.

      Applying the *WHAT CHECK* routine on the complete three di-
mensional structure of *Humicola insolens* Cel6B catalytic core
domain followed by subsequent visual analysis using *InsightII*
35 results in the following mutations to satisfy unsatisfied hydro-
gen bonds/salt bridges: L11Y ; T49A,S,N,Q,V,M,G ; N55G,A,S,T ;
N87Q,E,D ; A95S,T,N,D,Q,E ; I175T,G,A,V ; A182G ;
L187G,A,S,T,N,Q,H ; K192Q,E,N,D,S,T ; S268G,A,V,L,I,F ;
F249N,Q,S,T,D,E ; M337Q,Y,N,D,T,E.

Residues on the surface of internal cavities

This defines residues which are found to be on the surface of internal cavities in the enzyme structure. To detect these
5   the options *CAVITY* and *AACAVI* in the *WHAT IF* program is used. A probe radius of 1.4 Å is typically used to detect internal cavities where mutations could be performed. The mutations are preferentially mutating to a residue with a larger side chain, thereby decreasing the volume of the cavity, or mutating to a resi-
10 due with a smaller side chain, thereby increasing the volume of the cavity making it possible for a water molecule to be accommodated in the cavity. Both methods can increase the thermal stability of the enzyme structure. Residues having their side chain exposed to the cavity as determined by the *AACAVI* command
15 in WHAT IF or by visual inspection using e.g. the *InsightII* program are prefered targets for mutagenesis.

In *Humicola insolens* Cel6B this results to: V13, N14, Y17, S18, L21, K39, V40, V43, V47, N87, L88, R91, D92, C93, K103, R111, V117, F120, L136, E137, P138, A140, I141, N143, Q159,
20 I163, A166, L170, L179, D180, S217, V220, N222, I264, D266, Q267, R269, N284, F290, V309, G313, E314, S315, F331, Y334.

Preferably the following residues having their side chains exposed to the cavity in a favorable position for mutagenesis as judged visually using *InsightII*: V13, N14, Y17, S18, L21, V40,
25 V43, L88, V117, F120, L136, E137, A140, I141, Q159, I163, A166, L170, L179, S217, V220, N284, F290, V309, S315, F331, Y334.

Preferably the following mutations to decrease the volume of said cavities (in one letter code): V13L,I,F,Y,W; N14,Q,Y,V,L,I,F,W; Y17W; S18T,N,Q,V,L,I,F,Y,W; L21F,Y,W,I ;
30 V40I,L,F,Y,W ; V43I,L,F,Y,W ; L88F,Y,W,I ; V117L,I,F,Y,W ; F120Y,W ; L136I,F,Y,W ; E137Q,I,L,F,Y,W ; A140S,T,V,L,I,F,Y,W ; I141L,F,Y,W ; Q159I,F,Y,W,L ; I163L,F,Y,W ; L170I,F,Y,W ; L179I,F,Y,W ; S217T,N,Q,V,L,I,F,Y,W ; V220L,I,F,Y,W ; N284Q ; F290Y,W ; V309L,I,F,Y,W ; S315T ; F331Y,W ; Y334W.
35   The following mutations are preferred in order to increase the volume of said cavities: V13G,A,S,T ; N14G,A,S,T ; Y17G,A,S,T,F,V,L,I ; S18G,A ; L21V,G,A,S,T ; V40G,A,S,T ; V43G,A,S,T ; L88V,G,A,S,T ; V117G,A,S,T ; F120V,I,L,G,A,S,T ; L136V,G,A,S,T ; E137G,A,S,T,D,N,V ; A140G ; I141V,G,A,S,T ;

Q159N,G,A,S,T,V ; I163V,G,A,S,T ; A166G ; L170V,G,A,S,T ;
L179V,G,A,S,T ; S217G,A ; V220G,A,S,T ; N284G,A,S,T ; F290I,V,L
; V309G,A,S,T ; F331V,L,I,G,A,S,T ; Y334F,V,L,I,G,A,S,T.

5 <u>Improved Stability Towards Oxidation</u>

Some amino acid residues are sensitive towards oxidation by
oxidative detergents and will in their oxidized form have al-
tered properties e.g. catalytic properties, stability, pH opti-
mum. Surface exposed residues of the type Met are most labile
10 towards oxidation. Tyr or Trp are also known to be labile to-
wards oxidation. Mutation of surface exposed residues of the
above mentioned type will remove the sensitivity towards oxida-
tion. This comprises the residues: Y17, Y42, Y51, W52, Y86,
Y112, M144, Y165, W186, W189, Y226, Y234, W279, W282, M321,
15 M329, W330, Y334, M337, more preferably those which are also
present in the binding cleft: Y51, W52, Y86, W186, W189, W279,
W282.

<u>Altered pH profile</u>

20 The pH profile of an enzyme can be altered by changing the
electrostatic environment of the active site. Especially the
electrostatic field at the position of the catalytic proton do-
nor is a determinant of the alkalinisity of the enzyme. A change
in the electrostatic field at the point of the catalytic proton
25 donor towards a more negative electrostatic field can increase
the apparent pK_a of the catalytic proton donor, and thereby in-
crease the activity at more alkaline conditions. This change in
the electrostatic field can be obtained by mutations/deletions
or insertions of residues in the vicinity of the catalytic pro-
30 ton donor as follows:
1) Deletion of potentially positively charged residues.
2) Mutation of potentially positively charged residues to neu-
tral or potentially negatively charged residues.
3) Mutation of neutral residues to potentially negatively char-
35 ged residues.
4) Insertion of potentially negatively charged residues.

The mutations should preferably be made to surface exposed
residues and preferably not more than 15Å from the catalytic
proton donor, more preferably not more than 10Å from the cataly-

tic proton donor and most preferably nor more than 5Å from the catalytic proton donor.

Insertions/deletions should only be made in loop/turn regions and preferably not more than 15Å from the catalytic proton
5 donor.

This results in the following positions:
1) R9del, R31del, R75del, R91del, K103del, H174del, K192del, K212del, R214del, R257del, R269del, R276del, K310del, H343del.

10 2) R9, K20, R25, R31, K39, K41, K46, R60, R70, K73, R75, R91, K103, R111, K113, K123, K125, R153, R156, H174, H176, K192, K206, K212, R214, R245, R255, R257, R276, K310, H343 to neutral or potentially negatively charged residues (i.e. All 20 except R,K,H), preferably on the surface within 10Å of the catalytic
15 proton donor (D139): R91, K310

3) G3, N4, P5, S7, G8, T10, L11, L12, V13, N14, S15, Y17, S18, S19, Q23, Q26, A27, L29, S30, G32, Q34, T35, N36, A37, A38, Y42, V43, Q44, V47, G48, T49, Y51, W52, S54, N55, I56, F57, L58, L59,
20 V64, I66, Q67, N68, A69, A71, A72, A74, G76, N78, P79, Y86, L88, C93, S94, A95, G96, S98, S99, G100, L102, L104, S105, Q106, N107, G108, L109, N110, Y112, N114, V117, N118, P119, F120, A121, Q122, A126, A127, S128, V130, Q131, L136, P138, A140, I141, N143, M144, V145, T146, G147, T148, S149, A150, F151,
25 C152, N154, G157, P158, Q159, Q160, I163, G164, Y165, A166, S168, Q169, L170, Q171, A172, S173, I175, L177, L179, A182, N183, G185, W186, W189, A190, L193, P195, Q198, A201, T202, L204, Q205, A207, G208, N209, N210, A211, I213, S217, N219, V220, S221, N222, N224, P225, Y226, S227, T228, S229, N230,
30 P231, P232, P233, Y234, T235, S236, G237, S238, P239, P241, S244, T248, N249, N252, A253, Q256, G258, L259, P260, T261, Q262, I264, Q267, S268, V270, A271, L272, S273, G274, A275, S277, W279, G280, Q281, W282, C283, V285, N286, P287, G289, F290, G291, Q292, P293, F294, T295, T296, N297, T298, N299,
35 N300, P301, N302, V303, I306, V309, P311, G317, Q318, C319, G320, M321, G322, G323, A324, P325, A326, A327, G328, M329, W330, F331, A333, Y334, Q336, M337, Q340, N341, A342, I346.
Preferably on the surface within 10Å of the catalytic proton donor (D139): W52, Y86, L88, C93, S94, A95, S99, L136, P138,

A140, I141, n143, M144, V145, T146, C152, Q159, I163, L179,
A182, N183, G185, W186, S217, N219, V220, S221, N222, N224,
G280, Q281, W282, C283, more preferably on the surface within 5Å
of the catalytic proton donor (D139): P138, A140, N143, A182,
5 W186.

Altering the pH profile of an enzyme (2)

Another method to alter the pH profile of an enzyme is to
mutate the residues in or close to the binding cleft. This will
10 create a variant enzyme where the electrostatics of the active
site will be changed either directly due to altered charges or
partial charges in the binding cleft, or due to altered geometry
around the active site changing the degree of burial of the ac-
tive site residues. These changes should be made not more than
15 5Å from a residue in the binding cleft, and preferably not more
than 2.5Å from a residue in the binding cleft most preferably
mutating residues in the binding cleft.

Definition of Humicola-like cellulases and their sequences

20 The present invention includes variants of sequences having
at least 35% identity to the catalytic core domain of Humicola
insolens Cel6B. Percent sequence identity is determined by con-
ventional methods, by means of computer programs known in the
art such as GAP provided in the GCG program package (Program Ma-
25 nual for the Wisconsin Package, Version 8, August 1994, Genetics
Computer Group, 575 Science Drive, Madison, Wisconsin, USA
53711) as disclosed in Needleman, S.B. and Wunsch, C.D., (1970),
Journal of Molecular Biology, 48, 443-453, which is hereby in-
corporated by reference in its entirety, ie using the GAP algo-
30 rithm of the GCG package version 8 using a gap creation penalty
of 3.00 and a gap extension penalty of 0.10 and all other para-
meters are kept at their default value. The catalytic core do-
main of Humicola insolens Cel6B is defined as the 347 residues
used for the X-ray structure determination (positions 27-374 of
35 SEQ ID NO:4). Only the part of the sequence extending from the
start of the alignment to the catalytic core domain of Humicola
insolens Cel6B to the last residue aligning with to the cataly-
tic core domain of Humicola insolens Cel6B are included (as seen
in Figure 1 (1A+1B)). Following known sequences are within the

definition: *Orpinomyces sp.* SPTREMBL entry p78720 [residues 128-
459], *Orpinomyces sp.* SPTREMBL entry p78721 [residues 127-449],
Humicola insolens Cel6B (endocellulase CMC 38K in patent
WO9311249-A) [residues 27-379], *Trichoderma reesei* (*Trichoderma*
5 *longibrachiatum*) SwissProt entry p07987 [residues 112-471],
Fusarium oxysporum SwissProt entry p46236 [residues 103-462],
Humicola insolens Cel6A and patent number JP 1996126492-A/1)
[residues 112-473], *Acremonium cellulolyticus* (patent number
WO9733982-A1) [residues 86-437], *Penicillium purpurogenum*
10 (Presented at The Annual Meeting of Japan Society for Bi-
oscience, Biotechnology, and Agrochemistry, April 1-2, 1998, Na-
goya, Japan. The sequence was recorded on videotape) [residues
96-457], *Agaricus bisporus* SwissProt entry p49075 [residues 87-
438], *Phanerochaete chrysosporium* SPTREMBL entry q02321
15 [residues 103-460], *Neocallimastix patriciarum* SPTREMBL entry
q12646 [residues 98-428], *Humicola insolens* EMBL entry E11341
[residues 115-476].

Multiple alignment of sequences of the invention

20   Sequences having more than 35.0% identity to the catalytic
core domain of *Humicola insolens* Cel6B as defined above can be
aligned using the multiple alignment program Clustal W ver. 1.7
(Thompson *et.al.* Nucleic Acids Research Vol. 22 , No. 22 pp.
4673-4680 (1994)) which is able to include secondary structure
25 information in the alignment. The secondary structure of the ca-
talytic core domain of *Humicola insolens* Cel6B as defined previ-
ously in fig. 4 for the α-helix and β-strand regions can be in-
cluded in the input for a *profile/structure alignment*. Only po-
sitions belonging to α-helical region or a β-strand region in
30 both og the independant molecules are considered as being in a
to α-helical region or a β-strand region respectively (see also
fig. 1A/B). Using this information as the 1st profile and using
the remaining sequences as the 2nd profile. The option *Align se-
quences to 1st profile* is used to align sequences to the sequen-
35 ce of the catalytic core domain of *Humicola insolens* Cel6B ta-
king the structural elements into account. No alterations is ma-
de to the default parameters. The result of the alignment are

seen in figure 1A/B. This alignment is used to identify the po-
sitions equivalent to positions in the catalytic core domain of
Humicola insolens Cel6B.

5 <u>Alignment of new sequence to known alignment</u>

To align a new sequence with more than 35.0% sequence
identity as determined by the GAP program to the known alignment
in Fig. 4 the *Profile/Structure alignment* option of ClustalW is
applied. Only the part of the sequence extending from the start
10 of the GAP alignment to the catalytic core domain of *Humicola
insolens* Cel6B to the last residue aligning with to the cataly-
tic core domain of *Humicola insolens* Cel6B are included. The
alignment in Fig. 4 is read as 1st *profile* and the new sequence
is read as 2nd *profile*. The option *Align sequences to 1st profile*
15 is used to align a new sequence to the sequence alignment in
Fig. 4. No alterations is made to the default parameters. From
such an alignment residues in a new sequence at positions equi-
valent to positions in the catalytic core domain of *Humicola in-
solens* Cel6B can be identified.
20

<u>Structure based sequence alignment</u>

An more preferred way of identifying equivalent residues
between a "new" sequence ant the catalytic core domain of *Humi-
cola insolens* Cel6B is to determine the three-dimensional X-ray
25 structure fold of the "new" sequence and apply a structure based
sequence alignment as implemented in the *Modeler 97.0* program
included in the *Homology 97.0* package from MSI INC. using the
MALIGN3D command with the *GAP_PENALTIES_3D* parameters set to 0.0
and 1.75 and the *FIT_ATOMS* set to CA. This alignment will find
30 residues at structurally equivalent positions, *i.e.* having their
CA atoms not more than 3.5Å apart in a structural superposition.
From this alignment equivalent residues in a "new" sequence can
be identified.

<u>Increased color care activity by trimming of binding cleft</u>
<u>loops.</u>

        The *Humicola insolens* Cel6B is able to perform color cla-
rification as seen in examples 1 and 2 and has activity towards
5   CMC. *Neocallimastix patriciarum* SPTREMBL entry q12646 have been
shown to have activity towards CMC, the same is believed to be
the case for *Orpinomyces sp.* SPTREMBL entry p78720 and *Orpi-*
nomyces sp. SPTREMBL entry p78721. The origin of this is thought
to be a more open binding cleft caused by one or more of the
10 binding cleft encompassing loops being shorter that in the other
fungal family 6 cellulases, preferably one of the four longer
loops: Y86-N107, N219-D242, L272-P287 or W308-F331 (*Humicola in-*
solens Cel6B numbering) or equivalent regions as determined by
the multiple sequence alignment, more preferably the regions
15 N219-D242 or W308-F331 which are seen in the multiple sequence
alignment to be different in length. The extent of the loop re-
gions can be trimmed (ie made shorter) by deletion of individual
residues which together with mutation of neighboring residues
can optimize the color care effect. The loop manipulations can
20 be performed using site directed mutagenesis, region specific
random mutagenesis using spiked oligonucleotides, protein family
shuffling or by other methods.

Methods of preparing endoglucanase variants
25   Several methods for introducing mutations into genes are
known in the art. Cloning of cellulase-encoding DNA sequences
and methods for generating mutations at specific sites within
the cellulase-encoding sequence are mentioned in the following.
<u>Cloning a DNA sequence encoding a cellulase</u>
30   The DNA sequence encoding a parent cellulase may be isolated
from any cell or microorganism producing the cellulase in questi-
on, using various methods well known in the art. First, a genomic
DNA and/or cDNA library should be constructed using chromosomal
DNA or messenger RNA from the organism that produces the cellulase
35 to be studied. Then, if the amino acid sequence of the cellulase
is known, homologous, labelled oligonucleotide probes may be syn-
thesized and used to identify cellulase-encoding clones from a
genomic library prepared from the organism in question. Alter-
natively, a labelled oligonucleotide probe containing sequences

homologous to a known cellulase gene could be used as a probe to
identify cellulase-encoding clones, using hybridization and
washing conditions of lower stringency.

A method for identifying cellulase-encoding clones involves
5   inserting cDNA into an expression vector, such as a plasmid,
transforming cellulase-negative fungi with the resulting cDNA
library, and then plating the transformed fungi onto agar
containing a substrate for cellulase, thereby allowing clones
expressing the cellulase to be identified.

10   Alternatively, the DNA sequence encoding the enzyme may be
prepared synthetically by established standard methods, e.g. the
phosphoroamidite method. In the phosphoroamidite method, oligonu-
cleotides are synthesized, e.g. in an automatic DNA synthesizer,
purified, annealed, ligated and cloned in appropriate vectors.

15   Finally, the DNA sequence may be of mixed genomic and synthetic
origin, mixed synthetic and cDNA origin or mixed genomic and cDNA
origin, prepared by ligating fragments of synthetic, genomic or
cDNA origin (as appropriate, the fragments corresponding to
various parts of the entire DNA sequence), in accordance with
20   standard techniques. The DNA sequence may also be prepared by
polymerase chain reaction (PCR) using specific primers.

Site-directed mutagenesis

Once a cellulase-encoding DNA sequence has been isolated, and
desirable sites for mutation identified, mutations may be intro-
25   duced using synthetic oligonucleotides. These oligonucleotides
contain nucleotide sequences flanking the desired mutation sites;
mutant nucleotides are inserted during oligonucleotide synthesis.
In a specific method, a single-stranded gap of DNA, bridging the
cellulase-encoding sequence, is created in a vector carrying the
30   cellulase gene. Then the synthetic nucleotide, bearing the desired
mutation, is annealed to a homologous portion of the single-
stranded DNA. The remaining gap is then filled in with T7 DNA
polymerase and the construct is ligated using T4 ligase. A
specific example of this method is described in Morinaga et al.
35   (1984). US 4,760,025 discloses the introduction of oligonucleoti-
d s encoding multiple mutations by performing minor alterations of
the cassette. However, an even greater variety of mutations can be
introduced at any one time by the Morinaga method, because a

multitude of oligonucleotides, of various lengths, can be
introduced.

Another method of introducing mutations into cellulase-encoding
DNA sequences is described in Nelson and Long (1989). It involves
5   the 3-step generation of a PCR fragment containing the desired
mutation introduced by using a chemically synthesized DNA strand
as one of the primers in the PCR reactions. From the PCR-generated
fragment, a DNA fragment carrying the mutation may be isolated by
cleavage with restriction endonucleases and reinserted into an
10 expression plasmid.

Random mutagenesis

The random mutagenesis of a DNA sequence encoding a parent
cellulase may conveniently be performed by use of any method known
in the art.

15 For instance, the random mutagenesis may be performed by use of
a suitable physical or chemical mutagenizing agent, by use of a
suitable oligonucleotide, or by subjecting the DNA sequence to PCR
generated mutagenesis. Furthermore, the random mutagenesis may be
performed by use of any combination of these mutagenizing agents.
20 The mutagenizing agent may, e.g., be one which induces tran-
sitions, transversions, inversions, scrambling, deletions, and/or
insertions.

Examples of a physical or chemical mutagenizing agent suitable
for the present purpose include ultraviolet (UV) irradiation,
25 hydroxylamine, N-methyl-N'-nitro-N-nitrosoguanidine (MNNG), O-
methyl hydroxylamine, nitrous acid, ethyl methane sulphonate
(EMS), sodium bisulphite, formic acid, and nucleotide analogues.

When such agents are used, the mutagenesis is typically per-
formed by incubating the DNA sequence encoding the parent enzyme
30 to be mutagenized in the presence of the mutagenizing agent of
choice under suitable conditions for the mutagenesis to take
place, and selecting for mutated DNA having the desired
properties.

When the mutagenesis is performed by the use of an oligonucleo-
35 tide, the oligonucleotide may be doped or spiked with the three
non-parent nucleotides during the synthesis of the oligonucleotide
at the positions which are to be changed. The doping or spiking
may be done so that codons for unwanted amino acids are avoided.
The doped or spiked oligonucleotide can be incorporated into the

DNA encoding the cellulase enzyme by any published technique, using e.g. PCR, LCR or any DNA polymerase and ligase.

When PCR-generated mutagenesis is used, either a chemically treated or non-treated gene encoding a parent cellulase enzyme is
5 subjected to PCR under conditions that increase the mis-incorporation of nucleotides (Deshler 1992; Leung et al., Technique, Vol.1, 1989, pp. 11-15).

A mutator strain of *E. coli* (Fowler et al., Molec. Gen. Genet., 133, 1974, pp. 179-191), *S. cereviseae* or any other microbial
10 organism may be used for the random mutagenesis of the DNA encoding the cellulase enzyme by e.g. transforming a plasmid containing the parent enzyme into the mutator strain, growing the mutator strain with the plasmid and isolating the mutated plasmid from the mutator strain. The mutated plasmid may subsequently be
15 transformed into the expression organism.

The DNA sequence to be mutagenized may conveniently be present in a genomic or cDNA library prepared from an organism expressing the parent cellulase enzyme. Alternatively, the DNA sequence may be present on a suitable vector such as a plasmid or a
20 bacteriophage, which as such may be incubated with or otherwise exposed to the mutagenizing agent. The DNA to be mutagenized may also be present in a host cell either by being integrated in the genome of said cell or by being present on a vector harboured in the cell. Finally, the DNA to be mutagenized may be in isolated
25 form. It will be understood that the DNA sequence to be subjected to random mutagenesis is preferably a cDNA or a genomic DNA sequence.

In some cases it may be convenient to amplify the mutated DNA sequence prior to the expression step or the screening step being
30 performed. Such amplification may be performed in accordance with methods known in the art, the presently preferred method being PCR-generated amplification using oligonucleotide primers prepared on the basis of the DNA or amino acid sequence of the parent enzyme.

35 Subsequent to the incubation with or exposure to the mutage-nizing agent, the mutated DNA is expressed by culturing a suitable host cell carrying the DNA sequence under conditions allowing expression to take place. The host cell used for this purpose may be one which has been transformed with the mutated DNA sequence,

optionally present on a vector, or one which was carried the DNA
sequence encoding the parent enzyme during the mutagenesis
treatment. Examples of suitable host cells are fungal hosts such
as *Aspergillus niger* or *Aspergillus oryzae*.

5   The mutated DNA sequence may further comprise a DNA sequence
encoding functions permitting expression of the mutated DNA
sequence.

Localized random mutagenesis

        The random mutagenesis may advantageously be localized to a
10 part of the parent cellulase in question. This may, e.g., be
advantageous when certain regions of the enzyme have been
identified to be of particular importance for a given property of
the enzyme, and when modified are expected to result in a variant
having improved properties. Such regions may normally be
15 identified when the tertiary structure of the parent enzyme has
been elucidated and related to the function of the enzyme.

        The localized random mutagenesis is conveniently performed by
use of PCR-generated mutagenesis techniques as described above or
any other suitable technique known in the art.

20   Alternatively, the DNA sequence encoding the part of the DNA
sequence to be modified may be isolated, e.g. by being inserted
into a suitable vector, and said part may subsequently be subjec-
ted to mutagenesis by use of any of the mutagenesis methods
discussed above.

25   With respect to the screening step in the above-mentioned
method of the invention, this may conveniently be performed by use
of aa filter assay based on the following principle:

        A microorganism capable of expressing the mutated cellulase
enzyme of interest is incubated on a suitable medium and under
30 suitable conditions for the enzyme to be secreted, the medium
being provided with a double filter comprising a first protein-
binding filter and on top of that a second filter exhibiting a low
protein binding capability. The microorganism is located on the
second filter. Subsequent to the incubation, the first filter
35 comprising enzymes secreted from the microorganisms is separated
from the second filter comprising the microorganisms. The first
filter is subjected to screening for the desired enzymatic
activity and the corresponding microbial colonies present on the
second filter are identified.

The filter used for binding the enzymatic activity may be any
protein binding filter e.g. nylon or nitrocellulose. The top
filter carrying the colonies of the expression organism may be any
filter that has no or low affinity for binding proteins e.g.
5 cellulose acetate or Durapore™. The filter may be pretreated with
any of the conditions to be used for screening or may be treated
during the detection of enzymatic activity.

The enzymatic activity may be detected by a dye, fluorescence,
precipitation, pH indicator, IR-absorbance or any other known
10 technique for detection of enzymatic activity.

The detecting compound may be immobilized by any immobili-
zing agent, e.g., agarose, agar, gelatine, polyacrylamide, starch,
filter paper, cloth; or any combination of immobilizing agents.

Expression of cellulase variants

15 According to the invention, a DNA sequence encoding the variant
produced by methods described above, or by any alternative methods
known in the art, can be expressed, in enzyme form, using an
expression vector which typically includes control sequences
encoding a promoter, operator, ribosome binding site, translation
20 initiation signal, and, optionally, a repressor gene or various
activator genes.

The recombinant expression vector carrying the DNA sequence
encoding a cellulase variant of the invention may be any vector
which may conveniently be subjected to recombinant DNA procedures,
25 and the choice of vector will often depend on the host cell into
which it is to be introduced. Thus, the vector may be an
autonomously replicating vector, i.e. a vector which exists as an
extrachromosomal entity, the replication of which is independent
of chromosomal replication, e.g. a plasmid, a bacteriophage or an
30 extrachromosomal element, minichromosome or an artificial
chromosome. Alternatively, the vector may be one which, when
introduced into a host cell, is integrated into the host cell
genome and replicated together with the chromosome(s) into which
it has been integrated.

35 In the vector, the DNA sequence should be operably connected to
a suitable promoter sequence. The promoter may be any DNA sequence
which shows transcriptional activity in the host cell of choice
and may be derived from genes encoding proteins either homologous
or heterologous to the host cell. Examples of suitable promoters

for directing the transcription of the DNA sequence encoding a
cellulase variant of the invention, especially in a fungal host,
are those derived from the gene encoding *A. oryzae* TAKA amylase,
Rhizomucor miehei aspartic proteinase, *A. niger* neutral α-amylase,

5   *A. niger* acid stable α-amylase, *A. niger* glucoamylase, *Rhizomucor
    miehei* lipase, *A. oryzae* alkaline protease, *A. oryzae* triose
    phosphate isomerase or *A. nidulans* acetamidase.

        Examples of suitable promoters for use in bacterial host
    cells include the promoter of the *Bacillus stearothermophilus*

10 maltogenic amylase gene, the *Bacillus licheniformis* alpha-
    amylase gene, the *Bacillus amyloliquefaciens* alpha-amylase gene,
    the *Bacillus subtilis* alkaline protease gen, or the *Bacillus
    pumilus* xylosidase gene, or the phage Lambda P_R or P_L promoters
    or the E. coli <u>lac</u>, <u>trp</u> or <u>tac</u> promoters.

15   The expression vector of the invention may also comprise a
    suitable transcription terminator and, in eukaryotes, poly-
    adenylation sequences operably connected to the DNA sequence
    encoding the cellulase variant of the invention. Termination and
    polyadenylation sequences may suitably be derived from the same

20 sources as the promoter.

        The vector may further comprise a DNA sequence enabling the
    vector to replicate in the host cell in question. Examples of such
    sequences are the origins of replication of plasmids pUC19,
    pACYC177, pUB110, pE194, pAMB1 and pIJ702.

25   The vector may also comprise a selectable marker, e.g. a gene,
    the product of which complements a defect in the host cell, such
    as one which confers antibiotic resistance such as ampicillin,
    kanamycin, chloramphenicol or tetracyclin resistance. Furthermore,
    the vector may comprise *Aspergillus* selection markers such as

30 amdS, argB, niaD and sC, a marker giving rise to hygromycin resi-
    stance, or the selection may be accomplished by co-transformation,
    e.g. as described in WO 91/17243.

        The procedures used to ligate the DNA construct of the inven-
    tion encoding a cellulase variant, the promoter, terminator and

35 other elements, respectively, and to insert them into suitable
    vectors containing the information necessary for replication, are
    well known to persons skilled in the art (cf., for instance,
    Sambrook et al. (1989)).

The cell of the invention, either comprising a DNA construct or an expression vector of the invention as defined above, is advantageously used as a host cell in the recombinant production of a cellulase variant of the invention. The cell may be

5 transformed with the DNA construct of the invention encoding the variant, conveniently by integrating the DNA construct (in one or more copies) in the host chromosome. This integration is generally considered to be an advantage as the DNA sequence is more likely to be stably maintained in the cell. Integration of the DNA con-

10 structs into the host chromosome may be performed according to conventional methods, e.g. by homologous or heterologous recombination. Alternatively, the cell may be transformed with an expression vector as described above in connection with the different types of host cells.

15 The cell of the invention may be a cell of a higher organism such as a mammal or an insect, but is preferably a microbial cell, e.g. a bacterial or fungal cell.

Examples of bacterial host cells which on cultivation are capable of producing the enzyme of the invention

20 may be a gram-positive bacteria such as a strain of *Bacillus*, in particular *Bacillus alkalophilus*, *Bacillus amyloliquefaciens*, *Bacillus brevis*, *Bacillus lautus*, *Bacillus lentus*, *Bacillus licheniformis*, *Bacillus circulans*, *Bacillus coagulans*, *Bacillus megatherium*, *Bacillus stearothermophilus*, *Bacillus subtilis* and

25 *Bacillus thuringiensis*, a strain of *Lactobacillus*, a strain of *Streptococcus*, a strain of *Streptomyces*, in particular *Streptomyces lividans* and *Streptomyces murinus*, or the host cell may be a gram-negative bacteria such as a strain of *Escherichia coli*.

30 The transformation of the bacteria may be effected by protoplast transformation, electroporation, conjugation, or by using competent cells in a manner known per se (cf. e.g. Sambrook et al., *supra*).

When expressing the enzyme in a bacteria such as

35 *Escherichia coli*, the enzyme may be retained in the cytoplasm, typically as insoluble granules (known as inclusion bodies), or may be directed to the periplasmic space by a bacterial secretion sequence. In the former case, the cells are lysed and the granules are recovered and denatured after which the enzyme

is refolded by diluting the denaturing agent. In the latter
case, the enzyme may be recovered from the periplasmic space by
disrupting the cells, e.g. by sonication or osmotic shock, to
release the contents of the periplasmic space and recovering the
5 enzyme.

       When expressing the enzyme in a gram-positive bacteria
such as a strain of *Bacillus* or a strain of *Streptomyces*, the
enzyme may be retained in the cytoplasm, or may be directed to
the extracellular medium by a bacterial secretion sequence.

10   Examples of a fungal host cell which on cultivation are
capable of producing the enzyme of the invention is e.g. a
strain of *Aspergillus* or *Fusarium*, in particular *Aspergillus*
awamori, *Aspergillus nidulans*, *Aspergillus niger, Aspergillus*
oryzae, and *Fusarium oxysporum,* and a strain of *Trichoderma,*
15 preferably *Trichoderma harzianum*, *Trichoderma reesei* and
Trichoderma viride.

       Fungal cells may be transformed by a process involving
protoplast formation and transformation of the protoplasts
followed by regeneration of the cell wall in a manner known *per*
20 *se*. The use of a strain of *Aspergillus* as a host cell is
described in EP 238 023 (Novo Nordisk A/S), the contents of
which are hereby incorporated by reference.

       Examples of a host cell of yeast origin which on
cultivation are capable of producing the enzyme of the invention
25 is e.g. a strain of *Hansenula* sp., a strain of *Kluyveromyces*
sp., in particular *Kluyveromyces lactis* and *Kluyveromyces*
marcianus, a strain of *Pichia sp.*, a strain of *Saccharomyces*, in
particular *Saccharomyces carlsbergensis*, *Saccharomyces*
cerevisae, *Saccharomyces kluyveri* and *Saccharomyces uvarum*, a
30 strain of *Schizosaccharomyces sp.*, in particular
Schizosaccharomyces pombe, and a strain of *Yarrowia sp.*, in
particular *Yarrowia lipolytica*.

       Examples of a host cell of plant origin which on
cultivation are capable of producing the enzyme of the invention
35 is e.g. a plant cell of *Solanum tuberosum* or *Nicotiana tabacum*.

       In a yet further aspect, the present invention relates to a
method of producing a cellulase variant of the invention, which
method comprises cultivating a host cell as described above under

conditions conducive to the production of the variant and
recovering the variant from the cells and/or culture medium.

The medium used to cultivate the cells may be any conventional
medium suitable for growing the host cell in question and
5 obtaining expression of the cellulase variant of the invention.
Suitable media are available from commercial suppliers or may be
prepared according to published recipes (e.g. as described in
catalogues of the American Type Culture Collection).

The cellulase variant secreted from the host cells may con-
10 veniently be recovered from the culture medium by well-known
procedures, including separating the cells from the medium by
centrifugation or filtration, and precipitating proteinaceous
components of the medium by means of a salt such as ammonium
sulphate, followed by the use of chromatographic procedures such
15 as ion exchange chromatography, affinity chromatography, or the
like.

The cleaning or detergent or fabric conditioning compositions

During washing and wearing, dyestuff from dyed fabrics or
20 garment will conventionally bleed from the fabric which then
looks faded and worn. Removal of surface fibers from the fabric
will partly restore the original colours and looks of the
fabric. By the term "colour clarification", as used herein, is
meant the partly restoration of the initial colours of fabric or
25 garment throughout multiple washing cycles.

The term "de-pilling" denotes removing of pills from the
fabric surface.

The term "soaking liquor" denotes an aqueous liquor in
which laundry may be immersed prior to being subjected to a
30 conventional washing process. The soaking liquor may contain one
or more ingredients conventionally used in a washing or launder-
ing process.

The term "washing liquor" denotes an aqueous liquor in
which laundry is subjected to a washing process, i.e. usually a
35 combined chemical and mechanical action either manually or in a
washing machine. Conventionally, the washing liquor is an
aqueous solution of a powder or liquid detergent composition.

The term "rinsing liquor" denotes an aqueous liquor in
which laundry is immersed and treated, conventionally

immediately after being subjected to a washing process, in order
to rinse the laundry, i.e. essentially remove the detergent
solution from the laundry. The rinsing liquor may contain a
fabric conditioning or softening composition.

5   In another aspect, the present invention also relates to a
process for machine treatment of fabrics which process comprises
treating fabric during a rinse cycle of a machine washing
process with a rinse solution containing the composition
according to the invention.

10   The laundry subjected to the composition or the method of
the present invention may be conventional washable laundry.
Preferably, the major part of the laundry is sewn or unsewn
fabrics, including knits, wovens, denims, yarns, and toweling,
made from cotton, cotton blends or natural or manmade
15 cellulosics (e.g. originating from xylan-containing cellulose
fibers such as from wood pulp) or blends thereof. Examples of
blends are blends of cotton or rayon/viscose with one or more
companion material such as wool, synthetic fibers (e.g.
polyamide fibers, acrylic fibers, polyester fibers, polyvinyl
20 alcohol fibers, polyvinyl chloride fibers, polyvinylidene
chloride fibers, polyurethane fibers, polyurea fibers, aramid
fibers), and cellulose-containing fibers (e.g. rayon/viscose,
ramie, flax/linen, jute, cellulose acetate fibers, lyocell).
Cleaning composition according to claim 1 wherein the composi-
25 tion is a fabric softener or fabric conditioning composition for
the treatment of fabrics.

       The cleaning composition of the invention may be in the
form of a fabric softener composition comprising from about 1%
to about 90%, preferably from about 2% to about 50%, by weight
30 of one or more cationic fabric softening agents, nonionic fabric
softening agents, or mixtures thereof. In case of cationic fab-
ric softening agents, such agents may advantageously comprise
quaternary ammonium softening agents or amine precursors
thereof. A Specific example of a useful quaternary ammonium sof-
35 tening agent is N,N-di(2-tallowoyl-oxy-ethyl)-N,N-dimethyl ammo-
nium chloride.

DETERGENT AND FABRIC SOFTENER DISCLOSURE AND EXAMPLES

Surfactant system

The cleaning compositions according to the present
invention comprise a surfactant system, wherein the surfactant
can be selected from nonionic and/or anionic and/or cationic
5 and/or ampholytic and/or zwitterionic and/or semi-polar
surfactants.

The surfactant is typically present at a level from 0.1%
to 60% by weight.

The surfactant is preferably formulated to be compatible
10 with enzyme components present in the composition. In liquid or
gel compositions the surfactant is most preferably formulated in
such a way that it promotes, or at least does not degrade, the
stability of any enzyme in these compositions.

Preferred systems to be used according to the present
15 invention comprise as a surfactant one or more of the nonionic
and/or anionic surfactants described herein.

Polyethylene, polypropylene, and polybutylene oxide
condensates of alkyl phenols are suitable for use as the
nonionic surfactant of the surfactant systems of the present
20 invention, with the polyethylene oxide condensates being pre-
ferred. These compounds include the condensation products of
alkyl phenols having an alkyl group containing from about 6 to
about 14 carbon atoms, preferably from about 8 to about 14
carbon atoms, in either a straight chain or branched-chain con-
25 figuration with the alkylene oxide. In a preferred embodiment,
the ethylene oxide is present in an amount equal to from about 2
to about 25 moles, more preferably from about 3 to about 15
moles, of ethylene oxide per mole of alkyl phenol. Commercially
available nonionic surfactants of this type include Igepal^{TM} CO-
30 630, marketed by the GAF Corporation; and Triton^{TM} X-45, X-114,
X-100 and X-102, all marketed by the Rohm & Haas Company. These
surfactants are commonly referred to as alkylphenol alkoxylates
(e.g., alkyl phenol ethoxylates).

The condensation products of primary and secondary
35 aliphatic alcohols with about 1 to about 25 moles of ethylene
oxide are suitable for use as the nonionic surfactant of the
nonionic surfactant systems of the present invention. The alkyl
chain of the aliphatic alcohol can either be straight or
branched, primary or secondary, and generally contains from

about 8 to about 22 carbon atoms. Preferred are the condensation
products of alcohols having an alkyl group containing from about
8 to about 20 carbon atoms, more preferably from about 10 to
about 18 carbon atoms, with from about 2 to about 10 moles of
5   ethylene oxide per mole of alcohol. About 2 to about 7 moles of
ethylene oxide and most preferably from 2 to 5 moles of ethylene
oxide per mole of alcohol are present in said condensation pro-
ducts. Examples of commercially available nonionic surfactants
of this type include Tergitol^{TM} 15-S-9 (The condensation product
10 of C_{11}-C_{15} linear alcohol with 9 moles ethylene oxide),
Tergitol^{TM} 24-L-6 NMW (the condensation product of C_{12}-C_{14}
primary alcohol with 6 moles ethylene oxide with a narrow
molecular weight distribution), both marketed by Union Carbide
Corporation; Neodol^{TM} 45-9 (the condensation product of C_{14}-C_{15}
15 linear alcohol with 9 moles of ethylene oxide), Neodol^{TM} 23-3
(the condensation product of C_{12}-C_{13} linear alcohol with 3.0
moles of ethylene oxide), Neodol^{TM} 45-7 (the condensation
product of C_{14}-C_{15} linear alcohol with 7 moles of ethylene
oxide), Neodol^{TM} 45-5 (the condensation product of C_{14}-C_{15} linear
20 alcohol with 5 moles of ethylene oxide) marketed by Shell
Chemical Company, Kyro^{TM} EOB (the condensation product of C_{13}-C_{15}
alcohol with 9 moles ethylene oxide), marketed by The Procter &
Gamble Company, and Genapol LA 050 (the condensation product of
C_{12}-C_{14} alcohol with 5 moles of ethylene oxide) marketed by
25 Hoechst. Preferred range of HLB in these products is from 8-11
and most preferred from 8-10.

        Also useful as the nonionic surfactant of the surfactant
systems of the present invention are alkylpolysaccharides
disclosed in US 4,565,647, having a hydrophobic group containing
30 from about 6 to about 30 carbon atoms, preferably from about 10
to about 16 carbon atoms and a polysaccharide, e.g. a
polyglycoside, hydrophilic group containing from about 1.3 to
about 10, preferably from about 1.3 to about 3, most preferably
from about 1.3 to about 2.7 saccharide units. Any reducing
35 saccharide containing 5 or 6 carbon atoms can be used, e.g.,
glucose, galactose and galactosyl moieties can be substituted
for the glucosyl moieties (optionally the hydrophobic group is
attached at the 2-, 3-, 4-, etc. positions thus giving a glucose
or galactose as opposed to a glucoside or galactoside). The

intersaccharide bonds can be, e.g., between the one position of
the additional saccharide units and the 2-, 3-, 4-, and/or 6-
positions on the preceding saccharide units.

The preferred alkylpolyglycosides have the formula

$$R^2O(C_nH_{2n}O)_t(glycosyl)_x$$

wherein R^2 is selected from the group consisting of alkyl,
alkylphenyl, hydroxyalkyl, hydroxyalkylphenyl, and mixtures
thereof in which the alkyl groups contain from about 10 to about
18, preferably from about 12 to about 14, carbon atoms; n is 2
or 3, preferably 2; t is from 0 to about 10, pre-ferably 0; and
x is from about 1.3 to about 10, preferably from about 1.3 to
about 3, most preferably from about 1.3 to about 2.7. The
glycosyl is preferably derived from glucose. To prepare these
compounds, the alcohol or alkylpolyethoxy alcohol is formed
first and then reacted with glucose, or a source of glucose, to
form the glucoside (attachment at the 1-position). The
additional glycosyl units can then be attached between their 1-
position and the preceding glycosyl units 2-, 3-, 4-, and/or 6-
position, preferably predominantly the 2-position.

The condensation products of ethylene oxide with a
hydrophobic base formed by the condensation of propylene oxide
with propylene glycol are also suitable for use as the
additional nonionic surfactant systems of the present invention.
The hydrophobic portion of these compounds will preferably have
a molecular weight from about 1500 to about 1800 and will
exhibit water insolubility. The addition of polyoxyethylene
moieties to this hydrophobic portion tends to increase the water
solubility of the molecule as a whole, and the liquid character
of the product is retained up to the point where the
polyoxyethylene content is about 50% of the total weight of the
condensation product, which corresponds to condensation with up
to about 40 moles of ethylene oxide. Examples of compounds of
this type include certain of the commercially available
Pluronic™ surfactants, marketed by BASF.

Also suitable for use as the nonionic surfactant of the
nonionic surfactant system of the present invention, are the
condensation products of ethylene oxide with the product

resulting from the reaction of propylene oxide and
ethylenediamine. The hydrophobic moiety of these products
consists of the reaction product of ethylenediamine and excess
propylene oxide, and generally has a molecular weight of from
5 about 2500 to about 3000. This hydrophobic moiety is condensed
with ethylene oxide to the extent that the condensation product
contains from about 40% to about 80% by weight of
polyoxyethylene and has a molecular weight of from about 5,000
to about 11,000. Examples of this type of nonionic surfactant
10 include certain of the commercially available Tetronic[TM]
compounds, marketed by BASF.

Preferred for use as the nonionic surfactant of the
surfactant systems of the present invention are polyethylene
oxide condensates of alkyl phenols, condensation products of
15 primary and secondary aliphatic alcohols with from about 1 to
about 25 moles of ethyleneoxide, alkylpolysaccharides, and
mixtures hereof. Most preferred are C_8-C_{14} alkyl phenol
ethoxylates having from 3 to 15 ethoxy groups and C_8-C_{18} alcohol
ethoxylates (preferably C_{10} avg.) having from 2 to 10 ethoxy
20 groups, and mixtures thereof.
Highly preferred nonionic surfactants are polyhydroxy fatty acid
amide surfactants of the formula

$$R^2 - C - N - Z,$$
$$\quad\quad \| \quad \|$$
25 $$\quad\quad O \quad R^1$$

wherein R^1 is H, or R^1 is C_{1-4} hydrocarbyl, 2-hydroxyethyl, 2-
hydroxypropyl or a mixture thereof, R^2 is C_{5-31} hydrocarbyl, and
Z is a polyhydroxyhydrocarbyl having a linear hydrocarbyl chain
with at least 3 hydroxyls directly connected to the chain, or an
30 alkoxylated derivative thereof. Preferably, R^1 is methyl, R^2 is
straight C_{11-15} alkyl or C_{16-18} alkyl or alkenyl chain such as
coconut alkyl or mixtures thereof, and Z is derived from a
reducing sugar such as glucose, fructose, maltose or lactose, in
a reductive amination reaction.
35   Highly preferred anionic surfactants include alkyl
alkoxylated sulfate surfactants. Examples hereof are water
soluble salts or acids of the formula $RO(A)_mSO3M$ wherein R is an
unsubstituted C_{10}-C_{24} alkyl or hydroxyalkyl group having a C_{10}-
C_{24} alkyl component, preferably a C_{12}-C_{20} alkyl or hydro-xyalkyl,

more preferably C_{12}-C_{18} alkyl or hydroxyalkyl, A is an ethoxy or propoxy unit, m is greater than zero, typically between about 0.5 and about 6, more preferably between about 0.5 and about 3, and M is H or a cation which can be, for example, a metal cation

5 (e.g., sodium, potassium, lithium, calcium, magnesium, etc.), ammonium or substituted-ammonium cation. Alkyl ethoxylated sulfates as well as alkyl propoxylated sulfates are contemplated herein. Specific examples of substituted ammonium cations include methyl-, dimethyl, trimethyl-ammonium cations and

10 quaternary ammonium cations such as tetramethyl-ammonium and dimethyl piperdinium cations and those derived from alkylamines such as ethylamine, diethylamine, triethylamine, mixtures thereof, and the like. Exemplary surfactants are C_{12}-C_{18} alkyl polyethoxylate (1.0) sulfate (C_{12}-$C_{18}E(1.0)M$), C_{12}-C_{18} alkyl

15 polyethoxylate (2.25) sulfate (C_{12}-$C_{18}(2.25)M$, and C_{12}-C_{18} alkyl polyethoxylate (3.0) sulfate (C_{12}-$C_{18}E(3.0)M$), and C_{12}-C_{18} alkyl polyethoxylate (4.0) sulfate (C_{12}-$C_{18}E(4.0)M$), wherein M is conveniently selected from sodium and potassium.
Suitable anionic surfactants to be used are alkyl ester

20 sulfonate surfactants including linear esters of C_8-C_{20} carboxylic acids (i.e., fatty acids) which are sulfonated with gaseous SO_3 according to "The Journal of the American Oil Chemists Society", 52 (1975), pp. 323-329. Suitable starting materials would include natural fatty substances as derived from

25 tallow, palm oil, etc.
The preferred alkyl ester sulfonate surfactant, especially for laundry applications, comprise alkyl ester sulfonate surfactants of the structural formula:

$$
\begin{array}{c}
O \\
\parallel \\
R^3 - CH - C - OR^4 \\
| \\
SO_3M
\end{array}
$$
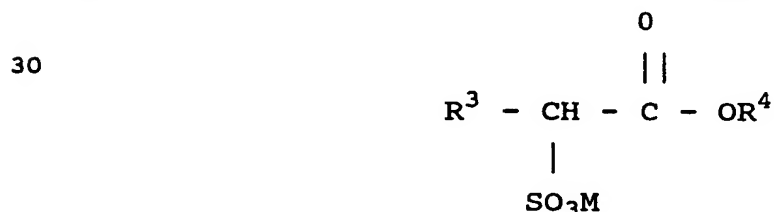
35 wherein R^3 is a C_8-C_{20} hydrocarbyl, preferably an alkyl, or combination thereof, R^4 is a C_1-C_6 hydrocarbyl, preferably an alkyl, or combination thereof, and M is a cation which forms a water soluble salt with the alkyl ester sulfonate. Suitable salt-forming cations include metals such as sodium, potassium,

and lithium, and substituted or unsubstituted ammonium cations, such as monoethanolamine, diethonolamine, and triethanolamine. Preferably, R^3 is C_{10}-C_{16} alkyl, and R^4 is methyl, ethyl or isopropyl. Especially preferred are the methyl ester sulfonates
5   wherein R^3 is C_{10}-C_{16} alkyl.

Other suitable anionic surfactants include the alkyl sulfate surfactants which are water soluble salts or acids of the formula $ROSO_3M$ wherein R preferably is a C_{10}-C_{24} hydrocarbyl, preferably an alkyl or hydroxyalkyl having a C_{10}-C_{20} alkyl com-
10 ponent, more preferably a C_{12}-C_{18} alkyl or hydroxyalkyl, and M is H or a cation, e.g., an alkali metal cation (e.g. sodium, potassium, lithium), or ammonium or substituted ammonium (e.g. methyl-, dimethyl-, and trimethyl ammonium cations and quaternary ammonium cations such as tetramethyl-ammonium and
15 dimethyl piperdinium cations and quaternary ammonium cations derived from alkylamines such as ethylamine, diethylamine, triethylamine, and mixtures thereof, and the like). Typically, alkyl chains of C_{12}-C_{16} are preferred for lower wash temperatures (e.g. below about 50°C) and C_{16}-C_{18} alkyl chains are preferred
20 for higher wash temperatures (e.g. above about 50°C).

Other anionic surfactants useful for detersive purposes can also be included in the cleaning, especially laundry detergent, compositions of the present invention. Theses can include salts (including, for example, sodium, potassium,
25 ammonium, and substituted ammonium salts such as mono- di- and triethanolamine salts) of soap, C_8-C_{22} primary or secondary alkanesulfonates, C_8-C_{24} olefinsulfonates, sulfonated polycarboxylic acids prepared by sulfonation of the pyrolyzed product of alkaline earth metal citrates, e.g., as described in
30 British patent specification No. 1,082,179, C_8-C_{24} alkylpo-lyglycolethersulfates (containing up to 10 moles of ethylene oxide); alkyl glycerol sulfonates, fatty acyl glycerol sulfonates, fatty oleyl glycerol sulfates, alkyl phenol ethylene oxide ether sulfates, paraffin sulfonates, alkyl phosphates,
35 isethionates such as the acyl isethionates, N-acyl taurates, alkyl succinamates and sulfosuccinates, monoesters of sulfosuccinates (especially saturated and unsaturated C_{12}-C_{18} monoesters) and diesters of sulfosuccinates (especially saturated and unsaturated C_6-C_{12} diesters), acyl sarcosinates,

sulfates of alkylpolysaccharides such as the sulfates of
alkylpolyglucoside (the nonionic nonsulfated compounds being
described below), branched primary alkyl sulfates, and alkyl
polyethoxy carboxylates such as those of the formula

5    $RO(CH_2CH_2O)_k-CH_2COO-M+$ wherein R is a C_8-C_{22} alkyl, k is an
integer from 1 to 10, and M is a soluble salt forming cation.
Resin acids and hydrogenated resin acids are also suitable, such
as rosin, hydrogenated rosin, and resin acids and hydrogenated
resin acids present in or derived from tall oil.

10   Alkylbenzene sulfonates are highly preferred. Especially
preferred are linear (straight-chain) alkyl benzene sulfonates
(LAS) wherein the alkyl group preferably contains from 10 to 18
carbon atoms.

            Further examples are described in "Surface Active Agents
15 and Detergents" (Vol. I and II by Schwartz, Perrry and Berch). A
variety of such surfactants are also generally disclosed in US
3,929,678, (Column 23, line 58 through Column 29, line 23,
herein incorporated by reference).

            When included therein, the cleaning, especially laundry
20 detergent, compositions of the present invention typically
comprise from about 1% to about 40%, preferably from about 3% to
about 20% by weight of such anionic surfactants.

            The cleaning compositions of the present invention may
also contain cationic, ampholytic, zwitterionic, and semi-polar
25 surfactants, as well as the nonionic and/or anionic surfactants
other than those already described herein.

            Cationic detersive surfactants suitable for use in the
laundry detergent compositions of the present invention are
those having one long-chain hydrocarbyl group. Examples of such
30 cationic surfactants include the ammonium surfactants such as
alkyltrimethylammonium halogenides, and those surfactants having
the formula:

$$[R^2(OR^3)_y][R^4(OR^3)_y]_2R^5N+X-$$
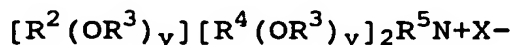
wherein R^2 is an alkyl or alkyl benzyl group having from about 8 to about 18 carbon atoms in the alkyl chain, each R^3 is selected form the group consisting of $-CH_2CH_2-$, $-CH_2CH(CH_3)-$, $-CH_2CH(CH_2OH)-$, $-CH_2CH_2CH_2-$, and mixtures thereof; each R^4 is

5   selected from the group consisting of C_1-C_4 alkyl, C_1-C_4 hydroxyalkyl, benzyl ring structures formed by joining the two R^4 groups, $-CH_2CHOHCHOHCOR^6CHOHCH_2OH$, wherein R^6 is any hexose or hexose polymer having a molecular weight less than about 1000, and hydrogen when y is not 0; R^5 is the same as R^4 or is an

10 alkyl chain,wherein the total number of carbon atoms or R^2 plus R^5 is not more than about 18; each y is from 0 to about 10,and the sum of the y values is from 0 to about 15; and X is any compatible anion.

      Highly preferred cationic surfactants are the water

15 soluble quaternary ammonium compounds useful in the present composition having the formula:

$$R_1R_2R_3R_4N^+X^- \quad (i)$$

20 wherein R_1 is C_8-C_{16} alkyl, each of R_2, R_3 and R_4 is independently C_1-C_4 alkyl, C_1-C_4 hydroxy alkyl, benzyl, and $-(C_2H_4O)_xH$ where x has a value from 2 to 5, and X is an anion. Not more than one of R_2, R_3 or R_4 should be benzyl.

      The preferred alkyl chain length for R_1 is $C_{12}-C_{15}$,

25 particularly where the alkyl group is a mixture of chain lengths derived from coconut or palm kernel fat or is derived synthetically by olefin build up or OXO alcohols synthesis.

      Preferred groups for R_2R_3 and R_4 are methyl and hydroxyethyl groups and the anion X may be selected from halide,

30 methosulphate, acetate and phosphate ions.

      Examples of suitable quaternary ammonium compounds of formulae (i) for use herein are:

     coconut trimethyl ammonium chloride or bromide;

     coconut methyl dihydroxyethyl ammonium chloride or bromide;

35   d cyl triethyl ammonium chloride;

     decyl dimethyl hydroxyethyl ammonium chloride or bromide;

     C_{12-15} dimethyl hydroxyethyl ammonium chloride or bromide;

     coconut dimethyl hydroxyethyl ammonium chloride or bromide;

myristyl trimethyl ammonium methyl sulphate;

lauryl dimethyl benzyl ammonium chloride or bromide;

lauryl dimethyl (ethenoxy)$_4$ ammonium chloride or bromide;

choline esters (compounds of formula (i) wherein R_1 is

$$CH_2-CH_2-O-\overset{||}{\underset{O}{C}}-C_{12-14} \text{ alkyl and } R_2R_3R_4 \text{ are methyl)}.$$

di-alkyl imidazolines [compounds of formula (i)].

Other cationic surfactants useful herein are also described in US 4,228,044 and in EP 000 224.

When included therein, the laundry detergent compositions of the present invention typically comprise from 0.2% to about 25%, preferably from about 1% to about 8% by weight of such cationic surfactants.

Ampholytic surfactants are also suitable for use in the laundry detergent compositions of the present invention. These surfactants can be broadly described as aliphatic derivatives of secondary or tertiary amines, or aliphatic derivatives of heterocyclic secondary and tertiary amines in which the aliphatic radical can be straight- or branched-chain. One of the aliphatic substituents contains at least about 8 carbon atoms, typically from about 8 to about 18 carbon atoms, and at least one contains an anionic water-solubilizing group, e.g. carboxy, sulfonate, sulfate. See US 3,929,678 (column 19, lines 18-35) for examples of ampholytic surfactants.

When included therein, the cleaning, e.g. laundry detergent, compositions of the present invention typically comprise from 0.2% to about 15%, preferably from about 1% to about 10% by weight of such ampholytic surfactants.

Zwitterionic surfactants are also suitable for use in cleaning compositions. These surfactants can be broadly described as derivatives of secondary and tertiary amines, derivatives of heterocyclic secondary and tertiary amines, or derivatives of quaternary ammonium, quaternary phosphonium or tertiary sulfonium compounds. See US 3,929,678 (column 19, line 38 through column 22, line 48) for examples of zwitterionic surfactants.

When included therein, the cleaning compositions of the
present invention typically comprise from 0.2% to about 15%,
preferably from about 1% to about 10% by weight of such
zwitterionic surfactants.

5   Semi-polar nonionic surfactants are a special category of
nonionic surfactants which include water-soluble amine oxides
containing one alkyl moiety of from about 10 to about 18 carbon
atoms and 2 moieties selected from the group consisting of alkyl
groups and hydroxyalkyl groups containing from about 1 to about

10 3 carbon atoms; watersoluble phosphine oxides containing one
alkyl moiety of from about 10 to about 18 carbon atoms and 2
moieties selected from the group consisting of alkyl groups and
hydroxyalkyl groups containing from about 1 to about 3 carbon
atoms; and water-soluble sulfoxides containing one alkyl moiety

15 from about 10 to about 18 carbon atoms and a moiety selected
from the group consisting of alkyl and hydroxyalkyl moieties of
from about 1 to about 3 carbon atoms.

        Semi-polar nonionic detergent surfactants include the
amine oxide surfactants having the formula:

20

$$\overset{\text{O}}{\underset{-}{}}$$

$$R^3(OR^4)xN(R^5)2$$
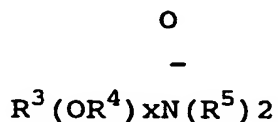
25 wherein R^3 is an alkyl, hydroxyalkyl, or alkyl phenyl group or
mixtures thereof containing from about 8 to about 22 carbon
atoms; R^4 is an alkylene or hydroxyalkylene group containing
from about 2 to about 3 carbon atoms or mixtures thereof; x is
from 0 to about 3: and each R^5 is an alkyl or hydroxyalkyl group

30 containing from about 1 to about 3 carbon atoms or a
polyethylene oxide group containing from about 1 to about 3
ethylene oxide groups. The R^5 groups can be attached to each
other, e.g., through an oxygen or nitrogen atom, to form a ring
structure.

35   Th se amine oxide surfactants in particular include C_{10}-C_{18}
alkyl dimethyl amine oxides and C_8-C_{12} alkoxy ethyl dihydroxy
ethyl amine oxides.

        When included therein, the cleaning compositions of the
present invention typically comprise from 0.2% to about 15%,

preferably from about 1% to about 10% by weight of such semi-polar nonionic surfactants.

Builder system

5   The compositions according to the present invention may further comprise a builder system. Any conventional builder system is suitable for use herein including aluminosilicate materials, silicates, polycarboxylates and fatty acids, materials such as ethylenediamine tetraacetate, metal ion

10 sequestrants such as aminopolyphosphonates, particularly ethylenediamine tetramethylene phosphonic acid and diethylene triamine pentamethylenephosphonic acid. Though less preferred for obvious environmental reasons, phosphate builders can also be used herein.

15   Suitable builders can be an inorganic ion exchange material, commonly an inorganic hydrated aluminosilicate material, more particularly a hydrated synthetic zeolite such as hydrated zeolite A, X, B, HS or MAP.

Another suitable inorganic builder material is layered

20 silicate, e.g. SKS-6 (Hoechst). SKS-6 is a crystalline layered silicate consisting of sodium silicate ($Na_2Si_2O_5$).

Suitable polycarboxylates containing one carboxy group include lactic acid, glycolic acid and ether derivatives thereof as disclosed in Belgian Patent Nos. 831,368, 821,369 and

25 821,370. Polycarboxylates containing two carboxy groups include the water-soluble salts of succinic acid, malonic acid, (ethylenedioxy) diacetic acid, maleic acid, diglycollic acid, tartaric acid, tartronic acid and fumaric acid, as well as the ether carboxylates described in German Offenle-enschrift

30 2,446,686, and 2,446,487, US 3,935,257 and the sulfinyl carboxylates described in Belgian Patent No. 840,623. Polycarboxylates containing three carboxy groups include, in particular, water-soluble citrates, aconitrates and citraconates as well as succinate derivatives such as the

35 carboxymethyloxysuccinates described in British Patent No. 1,379,241, lactoxysuccinates described in Netherlands Application 7205873, and the oxypolycarboxylate materials such as 2-oxa-1,1,3-propane tricarboxylates described in British Patent No. 1,387,447.

Polycarboxylates containing four carboxy groups include
oxydisuccinates disclosed in British Patent No. 1,261,829,
1,1,2,2,-ethane tetracarboxylates, 1,1,3,3-propane
tetrac7arboxylates containing sulfo substituents include the
5 sulfosuccinate derivatives disclosed in British Patent Nos.
1,398,421 and 1,398,422 and in US 3,936,448, and the sulfonated
pyrolysed citrates described in British Patent No. 1,082,179,
while polycarboxylates containing phosphone substituents are
disclosed in British Patent No. 1,439,000.

10   Alicyclic and heterocyclic polycarboxylates include
cyclopentane-cis,cis-cis-tetracarboxylates, cyclopentadienide
pentacarboxylates, 2,3,4,5-tetrahydro-furan - cis, cis, cis-
tetracarboxylates, 2,5-tetrahydro-furan-cis, discarboxylates,
2,2,5,5,-tetrahydrofuran - tetracarboxylates, 1,2,3,4,5,6-hexane
15 - hexacarboxylates and carboxymethyl derivatives of polyhydric
alcohols such as sorbitol, mannitol and xylitol. Aromatic
polycarboxylates include mellitic acid, pyromellitic acid and
the phthalic acid derivatives disclosed in British Patent No.
1,425,343.

20   Of the above, the preferred polycarboxylates are hydroxy-
carboxylates containing up to three carboxy groups per molecule,
more particularly citrates.

Preferred builder systems for use in the present
compositions include a mixture of a water-insoluble
25 aluminosilicate builder such as zeolite A or of a layered
silicate (SKS-6), and a water-soluble carboxylate chelating
agent such as citric acid.

A suitable chelant for inclusion in the cleaning composi-
tions in accordance with the invention is ethylenediamine-N,N'-
30 disuccinic acid (EDDS) or the alkali metal, alkaline earth
metal, ammonium, or substituted ammonium salts thereof, or
mixtures thereof. Preferred EDDS compounds are the free acid
form and the sodium or magnesium salt thereof. Examples of such
preferred sodium salts of EDDS include Na_2EDDS and Na_4EDDS.
35 Examples of such preferred magnesium salts of EDDS include
MgEDDS and Mg_2EDDS. The magnesium salts are the most preferred
for inclusion in compositions in accordance with the invention.

Preferred builder systems include a mixture of a water-
insoluble aluminosilicate builder such as zeolite A, and a water
soluble carboxylate chelating agent such as citric acid.

Other builder materials that can form part of the builder
5 system for use in granular compositions include inorganic
materials such as alkali metal carbonates, bicarbonates,
silicates, and organic materials such as the organic
phosphonates, amino polyalkylene phosphonates and amino
polycarboxylates.

10   Other suitable water-soluble organic salts are the homo-
or co-polymeric acids or their salts, in which the
polycarboxylic acid comprises at least two carboxyl radicals
separated form each other by not more than two carbon atoms.

Polymers of this type are disclosed in GB-A-1,596,756.
15 Examples of such salts are polyacrylates of MW 2000-5000 and
their copolymers with maleic anhydride, such copolymers having a
molecular weight of from 20,000 to 70,000, especially about
40,000.

Detergency builder salts are normally included in amounts
20 of from 5% to 80% by weight of the composition. Preferred levels
of builder for liquid detergents are from 5% to 30%.

Enzymes

Preferred cleaning compositions, in addition to the family
25 6 endo-β-1,4-glucanase, comprise other enzyme(s) which provides
cleaning performance and/or fabric care benefits.

Such enzymes include proteases, lipases, cutinases,
amylases, other cellulases, peroxidases, oxidases (e.g.
laccases).

30   <u>Proteases</u>: Any protease suitable for use in alkaline sol-
utions can be used. Suitable proteases include those of animal,
vegetable or microbial origin. Microbial origin is preferred.
Chemically or genetically modified mutants are included. The
protease may be a serine protease, preferably an alkaline
35 microbial protease or a trypsin-like protease. Examples of
alkaline proteases are subtilisins, especially those derived
from <u>Bacillus</u>, e.g., subtilisin Novo, subtilisin Carlsberg,
subtilisin 309, subtilisin 147 and subtilisin 168 (described in

WO 89/06279). Examples of trypsin-like proteases are trypsin
(e.g. of porcine or bovine origin) and the Fusarium protease
described in WO 89/06270.

Preferred commercially available protease enzymes include
5 those sold under the trade names Alcalase, Savinase, Primase,
Durazym, and Esperase by Novo Nordisk A/S (Denmark), those sold
under the tradename Maxatase, Maxacal, Maxapem, Properase,
Purafect and Purafect OXP by Genencor International, and those
sold under the tradename Opticlean and Optimase by Solvay
10 Enzymes. Protease enzymes may be incorporated into the composi-
tions in accordance with the invention at a level of from
0.00001% to 2% of enzyme protein by weight of the composition,
preferably at a level of from 0.0001% to 1% of enzyme protein by
weight of the composition, more preferably at a level of from
15 0.001% to 0.5% of enzyme protein by weight of the composition,
even more preferably at a level of from 0.01% to 0.2% of enzyme
protein by weight of the composition.

Lipases: Any lipase suitable for use in alkaline solutions
can be used. Suitable lipases include those of bacterial or
20 fungal origin. Chemically or genetically modified mutants are
included.

Examples of useful lipases include a Humicola lanuginosa
lipase, e.g., as described in EP 258 068 and EP 305 216, a
Rhizomucor miehei lipase, e.g., as described in EP 238 023, a
25 Candida lipase, such as a C. antarctica lipase, e.g., the C.
antarctica lipase A or B described in EP 214 761, a Pseudomonas
lipase such as a P. alcaligenes and P. pseudoalcaligenes lipase,
e.g., as described in EP 218 272, a P. cepacia lipase, e.g., as
described in EP 331 376, a P. stutzeri lipase, e.g., as
30 disclosed in GB 1,372,034, a P. fluorescens lipase, a Bacillus
lipase, e.g., a B. subtilis lipase (Dartois et al., (1993),
Biochemica et Biophysica acta 1131, 253-260), a B. stearo-
thermophilus lipase (JP 64/744992) and a B. pumilus lipase (WO
91/16422).

35   Furthermore, a number of cloned lipases may be useful,
including the Penicillium camembertii lipase described by
Yamaguchi et al., (1991), Gene 103, 61-67), the Geotricum
candidum lipase (Schimada, Y. et al., (1989), J. Biochem., 106,
383-388), and various Rhizopus lipases such as a R. delemar

lipase (Hass, M.J et al., (1991), Gene 109, 117-113), a <u>R. niveus</u> lipase (Kugimiya et al., (1992), Biosci. Biotech. Biochem. 56, 716-719) and a <u>R. oryzae</u> lipase.

Other types of lipolytic enzymes such as cutinases may 5 also be useful, e.g., a cutinase derived from <u>Pseudomonas mendocina</u> as described in WO 88/09367, or a cutinase derived from <u>Fusarium solani pisi</u> (e.g. described in WO 90/09446).

Especially suitable lipases are lipases such as M1 Lipase™, Luma fast™ and Lipomax™ (Genencor), Lipolase™ and 10 Lipolase Ultra™ (Novo Nordisk A/S), and Lipase P "Amano" (Amano Pharmaceutical Co. Ltd.).

The lipases are normally incorporated in the detergent composition at a level of from 0.00001% to 2% of enzyme protein by weight of the composition, preferably at a level of from 15 0.0001% to 1% of enzyme protein by weight of the composition, more preferably at a level of from 0.001% to 0.5% of enzyme protein by weight of the composition, even more preferably at a level of from 0.01% to 0.2% of enzyme protein by weight of the composition.

20   <u>Amylases:</u> Any amylase (a and/or b) suitable for use in alkaline solutions can be used. Suitable amylases include those of bacterial or fungal origin. Chemically or genetically modified mutants are included. Amylases include, for example, a-amylases obtained from a special strain of <u>B. licheniformis</u>, 25 described in more detail in GB 1,296,839. Commercially available amylases are Duramyl™, Termamyl™, Fungamyl™ and BAN™ (available from Novo Nordisk A/S) and Rapidase™ and Maxamyl P™ (available from Genencor).

The amylases are normally incorporated in the detergent 30 composition at a level of from 0.00001% to 2% of enzyme protein by weight of the composition, preferably at a level of from 0.0001% to 1% of enzyme protein by weight of the composition, more preferably at a level of from 0.001% to 0.5% of enzyme protein by weight of the composition, even more preferably at a 35 level of from 0.01% to 0.2% of enzyme protein by weight of the composition.

<u>Cellulases:</u> Any cellulase suitable for use in alkaline solutions can be used. Suitable cellulases include those of bacterial or fungal origin. Chemically or genetically modified

mutants are included. Suitable cellulases are disclosed in US 4,435,307 which discloses fungal cellulases produced from *Humicola insolens*, in WO 96/34108 and WO 96/34092 which disclose bacterial alkalophilic cellulases (BCE 103) from *Bacillus*, and

5 in WO 94/21801, US 5,475,101 and US 5,419,778 which disclose EG III cellulases from *Trichoderma*. Especially suitable cellulases are the cellulases having colour care benefits. Examples of such cellulases are cellulases described in European patent application No. 0 495 257 and the endoglucanase of the present

10 invention. Commercially available cellulases include Celluzyme^{TM} and Carezyme^{TM} produced by a strain of *Humicola insolens* (Novo Nordisk A/S), KAC-500(B)^{TM} (Kao Corporation), and Puradax^{TM} (Genencor International).

Cellulases are normally incorporated in the detergent

15 composition at a level of from 0.00001% to 2% of enzyme protein by weight of the composition, preferably at a level of from 0.0001% to 1% of enzyme protein by weight of the composition, more preferably at a level of from 0.001% to 0.5% of enzyme protein by weight of the composition, even more preferably at a

20 level of from 0.01% to 0.2% of enzyme protein by weight of the composition.

Peroxidases/Oxidases :Peroxidase enzymes are used in combination with hydrogen peroxide or a source thereof (e.g. a percarbonate, perborate or persulfate). Oxidase enzymes are used

25 in combination with oxygen. Both types of enzymes are used for "solution bleaching", i.e. to prevent transfer of a textile dye from a dyed fabric to another fabric when said fabrics are washed together in a wash liquor, preferably together with an enhancing agent as described in e.g. WO 94/12621 and WO

30 95/01426. Suitable peroxidases/oxidases include those of plant, bacterial or fungal origin. Chemically or genetically modified mutants are included.

Peroxidase and/or oxidase enzymes are normally incorporated in the detergent composition at a level of from

35 0.00001% to 2% of enzyme protein by weight of the composition, preferably at a level of from 0.0001% to 1% of enzyme protein by weight of the composition, more preferably at a level of from 0.001% to 0.5% of enzyme protein by weight of the composition,

even more preferably at a level of from 0.01% to 0.2% of enzyme
protein by weight of the composition.

Mixtures of the above mentioned enzymes are encompassed
herein, in particular a mixture of a protease, an amylase, a
5 lipase and/or a cellulase.

The enzyme of the invention, or any other enzyme
incorporated in the detergent composition, is normally
incorporated in the detergent composition at a level from
0.00001% to 2% of enzyme protein by weight of the composition,
10 preferably at a level from 0.0001% to 1% of enzyme protein by
weight of the composition, more preferably at a level from
0.001% to 0.5% of enzyme protein by weight of the composition,
even more preferably at a level from 0.01% to 0.2% of enzyme
protein by weight of the composition.

15

Bleaching agents

Additional optional detergent ingredients that can be
included in the cleaning or detergent compositions of the
present invention include bleaching agents such as PB1, PB4 and
20 percarbonate with a particle size of 400-800 microns. These
bleaching agent components can include one or more oxygen
bleaching agents and, depending upon the bleaching agent chosen,
one or more bleach activators. When present oxygen bleaching
compounds will typically be present at levels of from about 1%
25 to about 25%. In general, bleaching compounds are optional added
components in non-liquid formulations, e.g. granular detergents.

The bleaching agent component for use herein can be any of
the bleaching agents useful for detergent compositions including
oxygen bleaches as well as others known in the art.

30   The bleaching agent suitable for the present invention can
be an activated or non-activated bleaching agent.

One category of oxygen bleaching agent that can be used
encompasses percarboxylic acid bleaching agents and salts
thereof. Suitable examples of this class of agents include
35 magnesium monoperoxyphthalate hexahydrate, the magnesium salt of
meta-chloro perbenzoic acid, 4-nonylamino-4-oxoperoxybutyric
acid and diperoxydodecanedioic acid. Such bleaching agents are
disclosed in US 4,483,781, US 740,446, EP 0 133 354 and US

4,412,934. Highly preferred bl aching agents also include 6-
nonylamino-6-oxoperoxycaproic acid as described in US 4,634,551.

Another category of bleaching agents that can be used
encompasses the halogen bleaching agents. Examples of hypohalite
5 bleaching agents, for example, include trichloro isocyanuric
acid and the sodium and potassium dichloroisocyanurates and N-
chloro and N-bromo alkane sulphonamides. Such materials are nor-
mally added at 0.5-10% by weight of the finished product,
preferably 1-5% by weight.

10   The hydrogen peroxide releasing agents can be used in
combination with bleach activators such as tetra-
acetylethylenediamine (TAED), nonanoyloxybenzenesulfonate (NOBS,
described in US 4,412,934), 3,5-trimethyl-
hexsanoloxybenzenesulfonate (ISONOBS, described in EP 120 591)
15 or pentaacetylglucose (PAG), which are perhydrolyzed to form a
peracid as the active bleaching species, leading to improved
bleaching effect. In addition, very suitable are the bleach
activators C8(6-octanamido-caproyl) oxybenzene-sulfonate, C9(6-
nonanamido caproyl) oxybenzenesulfonate and C10 (6-decanamido
20 caproyl) oxybenzenesulfonate or mixtures thereof. Also suitable
activators are acylated citrate esters such as disclosed in
European Patent Application No. 91870207.7.

Useful bleaching agents, including peroxyacids and
bleaching systems comprising bleach activators and peroxygen
25 bleaching compounds for use in cleaning compositions according
to the invention are described in application USSN 08/136,626.

The hydrogen peroxide may also be present by adding an
enzymatic system (i.e. an enzyme and a substrate therefore)
which is capable of generation of hydrogen peroxide at the
30 beginning or during the washing and/or rinsing process. Such
enzymatic systems are disclosed in European Patent Application
EP 0 537 381.

Bleaching agents other than oxygen bleaching agents are
also known in the art and can be utilized herein. One type of
35 non-oxygen bleaching agent of particular interest includes
photoactivated bleaching agents such as the sulfonated zinc and-
/or aluminium phthalocyanines. These materials can be deposited
upon the substrate during the washing process. Upon irradiation
with light, in the presence of oxygen, such as by hanging

clothes out to dry in the daylight, the sulfonated zinc
phthalocyanine is activated and, consequently, the substrate is
bleached. Preferred zinc phthalocyanine and a photoactivated
bleaching process are described in US 4,033,718. Typically,
5 detergent composition will contain about 0.025% to about 1.25%,
by weight, of sulfonated zinc phthalocyanine.

        Bleaching agents may also comprise a manganese catalyst.
The manganese catalyst may, e.g., be one of the compounds
described in "Efficient manganese catalysts for low-temperature
10 bleaching", Nature 369, 1994, pp. 637-639.

Suds suppressors

        Another optional ingredient is a suds suppressor,
exemplified by silicones, and silica-silicone mixtures.
15 Silicones can generally be represented by alkylated polysiloxane
materials, while silica is normally used in finely divided forms
exemplified by silica aerogels and xerogels and hydrophobic
silicas of various types. Theses materials can be incorporated
as particulates, in which the suds suppressor is advantageously
20 releasably incorporated in a water-soluble or waterdispersible,
substantially non surface-active detergent impermeable carrier.
Alternatively the suds suppressor can be dissolved or dispersed
in a liquid carrier and applied by spraying on to one or more of
the other components.
25   A preferred silicone suds controlling agent is disclosed
in US 3,933,672. Other particularly useful suds suppressors are
the self-emulsifying silicone suds suppressors, described in
German Patent Application DTOS 2,646,126. An example of such a
compound is DC-544, commercially available form Dow Corning,
30 which is a siloxane-glycol copolymer. Especially preferred suds
controlling agent are the suds suppressor system comprising a
mixture of silicone oils and 2-alkyl-alkanols. Suitable 2-alkyl-
alkanols are 2-butyl-octanol which are commercially available
under the trade name Isofol 12 R.
35   Such suds suppressor system are described in European
Patent Application EP 0 593 841.

        Especially preferred silicone suds controlling agents are
described in European Patent Application No. 92201649.8. Said

compositions can comprise a silicone/ silica mixture in
combination with fumed nonporous silica such as Aerosil^R.

The suds suppressors described above are normally employed
at levels of from 0.001% to 2% by weight of the composition,
5 preferably from 0.01% to 1% by weight.

Other components

Other components conventionally used in cleaning or
detergent compositions may be employed such as soil-suspending
10 agents, soil-releasing agents, optical brighteners, abrasives,
bactericides, tarnish inhibitors, coloring agents, and/or
encapsulated or nonencapsulated perfumes.

Especially suitable encapsulating materials are water
soluble capsules which consist of a matrix of polysaccharide and
15 polyhydroxy compounds such as described in GB 1,464,616.

Other suitable water soluble encapsulating materials
comprise dextrins derived from ungelatinized starch acid esters
of substituted dicarboxylic acids such as described in US
3,455,838. These acid-ester dextrins are, preferably, prepared
20 from such starches as waxy maize, waxy sorghum, sago, tapioca
and potato. Suitable examples of said encapsulation materials
include N-Lok manufactured by National Starch. The N-Lok
encapsulating material consists of a modified maize starch and
glucose. The starch is modified by adding monofunctional
25 substituted groups such as octenyl succinic acid anhydride.

Antiredeposition and soil suspension agents suitable
herein include cellulose derivatives such as methylcellulose,
carboxymethylcellulose and hydroxyethylcellulose, and homo- or
co-polymeric polycarboxylic acids or their salts. Polymers of
30 this type include the polyacrylates and maleic anhydride-acrylic
acid copolymers previously mentioned as builders, as well as
copolymers of maleic anhydride with ethylene, methylvinyl ether
or methacrylic acid, the maleic anhydride constituting at least
20 mole percent of the copolymer. These materials are normally
35 used at levels of from 0.5% to 10% by weight, more preferably
form 0.75% to 8%, most preferably from 1% to 6% by weight of the
composition.

Preferred optical brighteners are anionic in character,
examples of which are disodium 4,4'-bis-(2-diethanolamino-4-

anilino -s- triazin-6-ylamino)stilbene-2:2' disulphonate,
disodium 4, - 4'-bis-(2-morpholino-4-anilino-s-triazin-6-
ylamino-stilbene-2:2' - disulphonate, disodium 4,4' - bis-(2,4-
dianilino-s-triazin-6-ylamino)stilbene-2:2' - disulphonate,
5 monosodium 4',4'' - bis-(2,4-dianilino-s-tri-azin-6
ylamino)stilbene-2-sulphonate, disodium 4,4' -bis-(2-anilino-4-
(N-methyl-N-2-hydroxyethylamino)-s-triazin-6-ylamino)stilbene-
2,2' - disulphonate, di-sodium 4,4' -bis-(4-phenyl-2,1,3-
triazol-2-yl)-stilbene-2,2' disulphonate, di-so-dium 4,4'bis(2-
10 anilino-4-(1-methyl-2-hydroxyethylamino)-s-triazin-6-ylami-
no)stilbene-2,2'disulphonate, sodium 2(stilbyl-4''-(naphtho-
1',2':4,5)-1,2,3, - triazole-2''-sulphonate and 4,4'-bis(2-
sulphostyryl)biphenyl.

       Other useful polymeric materials are the polyethylene
15 glycols, particularly those of molecular weight 1000-10000, more
particularly 2000 to 8000 and most preferably about 4000. These
are used at levels of from 0.20% to 5% more preferably from
0.25% to 2.5% by weight. These polymers and the previously
mentioned homo- or co-polymeric poly-carboxylate salts are
20 valuable for improving whiteness maintenance, fabric ash
deposition, and cleaning performance on clay, proteinaceous and
oxidizable soils in the presence of transition metal impurities.
       Soil release agents useful in compositions of the present
invention are conventionally copolymers or terpolymers of
25 terephthalic acid with ethylene glycol and/or propylene glycol
units in various arrangements. Examples of such polymers are
disclosed in US 4,116,885 and 4,711,730 and EP 0 272 033. A
particular preferred polymer in accordance with EP 0 272 033 has
the formula:
30

$(CH_3(PEG)_{43})_{0.75}(POH)_{0.25}[T-PO)_{2.8}(T-PEG)_{0.4}]T(POH)_{0.25}((PEG)_{43}CH_3)_{0.75}$
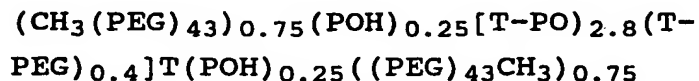
where PEG is $-(OC_2H_4)O-$, PO is (OC_3H_6O) and T is $(pOOC_6H_4CO)$.
35   Also very useful are modified polyesters as random
copolymers of dimethyl terephthalate, dimethyl
sulfoisophthalate, ethylene glycol and 1,2-propanediol, the end
groups consisting primarily of sulphobenzoate and secondarily of
mono esters of ethylene glycol and/or 1,2-propanediol. The

target is to obtain a polymer capped at both end by
sulphobenzoate groups, "primarily", in the pres nt context most
of said copolymers herein will be endcapped by sulphobenzoate
groups. However, some copolymers will be less than fully capped,
5 and therefore their end groups may consist of monoester of
ethylene glycol and/or 1,2-propanediol, thereof consist "secon-
darily" of such species.

The selected polyesters herein contain about 46% by weight
of dimethyl terephthalic acid, about 16% by weight of 1,2-
10 propanediol, about 10% by weight ethylene glycol, about 13% by
weight of dimethyl sulfobenzoic acid and about 15% by weight of
sulfoisophthalic acid, and have a molecular weight of about
3.000. The polyesters and their method of preparation are
described in detail in EP 311 342.

15

Softening agents

Fabric softening agents can also be incorporated into
cleaning compositions in accordance with the present invention.
These agents may be inorganic or organic in type. Inorganic
20 softening agents are exemplified by the smectite clays disclosed
in GB-A-1 400898 and in US 5,019,292. Organic fabric softening
agents include the water insoluble tertiary amines as disclosed
in GB-A1 514 276 and EP 0 011 340 and their combination with
mono C_{12}-C_{14} quaternary ammonium salts are disclosed in EP-B-0
25 026 528 and di-long-chain amides as disclosed in EP 0 242 919.
Other useful organic ingredients of fabric softening systems
include high molecular weight polyethylene oxide materials as
disclosed in EP 0 299 575 and 0 313 146.

Levels of smectite clay are normally in the range from 5%
30 to 15%, more preferably from 8% to 12% by weight, with the
material being added as a dry mixed component to the remainder
of the formulation. Organic fabric softening agents such as the
water-insoluble tertiary amines or dilong chain amide materials
are incorporated at levels of from 0.5% to 5% by weight,
35 normally from 1% to 3% by weight whilst the high molecular
weight polyethylene oxide materials and the water soluble
cationic materials are added at levels of from 0.1% to 2%,
normally from 0.15% to 1.5% by weight. These materials are
normally added to the spray dried portion of the composition,

although in some instances it may be more convenient to add them
as a dry mixed particulate, or spray them as molten liquid on to
other solid components of the composition.

Polymeric dye-transfer inhibiting agents

The cleaning, especially laundry detergent, compositions
according to the present invention may also comprise from 0.001%
to 10%, preferably from 0.01% to 2%, more preferably form 0.05%
to 1% by weight of polymeric dye- transfer inhibiting agents.
Said polymeric dye-transfer inhibiting agents are normally
incorporated into detergent compositions in order to inhibit the
transfer of dyes from colored fabrics onto fabrics washed
therewith. These polymers have the ability of complexing or
adsorbing the fugitive dyes washed out of dyed fabrics before
the dyes have the opportunity to become attached to other
articles in the wash.

Especially suitable polymeric dye-transfer inhibiting
agents are polyamine N-oxide polymers, copolymers of N-vinyl-
pyrrolidone and N-vinylimidazole, polyvinylpyrrolidone polymers,
polyvinyloxazolidones and polyvinylimidazoles or mixtures
thereof.

Addition of such polymers also enhances the performance of
the enzymes according the invention.

The cleaning composition according to the invention can be
in liquid, paste, gels, bars or granular forms.

Non-dusting granulates may be produced, e.g., as disclosed
in US 4,106,991 and 4,661,452 (both to Novo Industri A/S) and
may optionally be coated by methods known in the art. Examples
of waxy coating materials are poly(ethylene oxide) products
(polyethyleneglycol, PEG) with mean molecular weights of 1000 to
20000; ethoxylated nonylphenols having from 16 to 50 ethylene
oxide units; ethoxylated fatty alcohols in which the alcohol
contains from 12 to 20 carbon atoms and in which there are 15 to
80 ethylene oxide units; fatty alcohols; fatty acids; and mono-
and di- and triglycerides of fatty acids. Examples of film-
forming coating materials suitable for application by fluid bed
techniques are given in GB 1483591.

Granular compositions according to the present invention
can also be in "compact form", i.e. they may have a relatively

higher density than conventional granular detergents or cleaning compositions, i.e. form 550 to 950 g/l; in such case, the granular detergent compositions according to the present invention will contain a lower amount of "Inorganic filler

5 salt", compared to conventional granular detergents; typical filler salts are alkaline earth metal salts of sulphates and chlorides, typically sodium sulphate; "Compact" detergent typically comprise not more than 10% filler salt. The liquid compositions according to the present invention can also be in

10 "concentrated form", in such case, the liquid detergent compositions according to the present invention will contain a lower amount of water, compared to conventional liquid detergents. Typically, the water content of the concentrated liquid detergent is less than 30%, more preferably less than

15 20%, most preferably less than 10% by weight of the detergent compositions.

In another preferred embodiment, the cleaning composition is a granular detergent composition containing no more than 40%, preferably no more than 15%, by weight of inorganic filler salt.

20 The compositions of the invention may for example, be formulated as hand and machine laundry detergent compositions including laundry additive compositions and compositions suitable for use in the pretreatment of stained fabrics, rinse added fabric softener compositions, and compositions for use in

25 general household hard surface cleaning operations and dishwashing operations.

The following examples are meant to exemplify compositions for the present invention, but are not necessarily meant to limit or otherwise define the scope of the invention.

30 In the detergent compositions, the abbreviated component identifications have the following meanings:

LAS: Sodium linear C_{12} alkyl benzene sulphonate

TAS: Sodium tallow alkyl sulphate

35 XYAS: Sodium C_{1X} - C_{1Y} alkyl sulfate

SS: Secondary soap surfactant of formula 2-butyl octanoic acid

25EY: A C_{12} - C_{15} predominantly linear primary alcohol condensed with an average of Y moles of ethylene oxide

45EY: A C_{14} - C_{15} predominantly linear primary alcohol condensed with an average of Y moles of ethylene oxide

XYEZS: C_{1X} - C_{1Y} sodium alkyl sulfate condensed with an average of Z moles of ethylene oxide per mole

5 Nonionic: C_{13} - C_{15} mixed ethoxylated/propoxylated fatty alcohol with an average degree of ethoxylation of 3.8 and an average degree of propoxylation of 4.5 sold under the tradename Plurafax LF404 by BASF Gmbh

CFAA: C_{12} - C_{14} alkyl N-methyl glucamide

10 TFAA: C_{16} - C_{18} alkyl N-methyl glucamide

Silicate: Amorphous Sodium Silicate ($SiO_2:Na_2O$ ratio = 2.0)

NaSKS-6:   Crystalline layered silicate of formula $d-Na_2Si_2O_5$

Carbonate: Anhydrous sodium carbonate

Phosphate: Sodium tripolyphosphate

15 MA/AA: Copolymer of 1:4 maleic/acrylic acid, average molecular weight about 80,000

Polyacrylate: Polyacrylate homopolymer with an average molecular weight of 8,000 sold under the tradename PA30 by BASF Gmbh

20 Zeolite A: Hydrated Sodium Aluminosilicate of formula $Na_{12}(AlO_2SiO_2)_{12}$. $27H_2O$ having a primary particle size in the range from 1 to 10 micrometers

Citrate: Tri-sodium citrate dihydrate

Citric: Citric Acid

25 Perborate: Anhydrous sodium perborate monohydrate bleach, empirical formula $NaBO_2.H_2O_2$

PB4:   Anhydrous sodium perborate tetrahydrate

Percarbonate: Anhydrous sodium percarbonate bleach of empirical formula $2Na_2CO_3.3H_2O_2$

30 TAED: Tetraacetyl ethylene diamine

CMC: Sodium carboxymethyl cellulose

DETPMP: Diethylene triamine penta (methylene phosphonic acid), marketed by Monsanto under the Tradename Dequest 2060

PVP: Polyvinylpyrrolidone polymer

35 EDDS: Ethylenediamine-N, N'-disuccinic acid, [S,S] isomer in the form of the sodium salt

Suds Suppressor: 25% paraffin wax Mpt 50°C, 17% hydrophobic silica, 58% paraffin oil

Granular Suds suppressor: 12% Silicone/silica, 18% stearyl alcohol, 70% starch in granular form

Sulphate: Anhydrous sodium sulphate

HMWPEO: High molecular weight polyethylene oxide

5 TAE 25:   Tallow alcohol ethoxylate (25)

Detergent Example I

A granular fabric cleaning composition in accordance with the
10 invention may be prepared as follows:

Sodium linear C_{12} alkyl benzene sulfonate	6.5
Sodium sulfate	15.0
Zeolite A	26.0
Sodium nitrilotriacetate	5.0
Enzyme of the invention	0.1
PVP	0.5
TAED	3.0
Boric acid	4.0
Perborate	18.0
Phenol sulphonate	0.1
Minors	Up to 100

Detergent Example II

25

A compact granular fabric cleaning composition (density 800 g/l)
in accord with the invention may be prepared as follows:

45AS	8.0
25E3S	2.0
25E5	3.0
25E3	3.0
TFAA	2.5
Zeolite A	17.0
NaSKS-6	12.0
Citric acid	3.0
Carbonate	7.0
MA/AA	5.0
CMC	0.4

Enzyme of the invention	0.1
TAED	6.0
Percarbonate	22.0
EDDS	0.3
Granular suds suppressor	3.5
water/minors	Up to 100%

Detergent Example III

Granular fabric cleaning compositions in accordance with the invention which are especially useful in the laundering of coloured fabrics were prepared as follows:

LAS	10.7	-
TAS	2.4	-
TFAA	-	4.0
45AS	3.1	10.0
45E7	4.0	-
25E3S	-	3.0
68E11	1.8	-
25E5	-	8.0
Citrate	15.0	7.0
Carbonate	-	10
Citric acid	2.5	3.0
Zeolite A	32.1	25.0
Na-SKS-6	-	9.0
MA/AA	5.0	5.0
DETPMP	0.2	0.8
Enzyme of the invention	0.10	0.05
Silicate	2.5	-
Sulphate	5.2	3.0
PVP	0.5	-
Poly (4-vinylpyridine)-N-Oxide/copolymer of vinyl-imidazole and vinyl-pyrrolidone	-	0.2
P rborate	1.0	-
Phenol sulfonate	0.2	-
Water/Minors		Up to 100%

Detergent Example IV

Granular fabric cleaning compositions in accordance with the invention which provide "Softening through the wash" capability may be prepared as follows:

45AS	-	10.0
LAS	7.6	-
68AS	1.3	-
45E7	4.0	-
25E3	-	5.0
Coco-alkyl-dimethyl hydroxy-ethyl ammonium chloride	1.4	1.0
Citrate	5.0	3.0
Na-SKS-6	-	11.0
Zeolite A	15.0	15.0
MA/AA	4.0	4.0
DETPMP	0.4	0.4
Perborate	15.0	-
Percarbonate	-	15.0
TAED	5.0	5.0
Smectite clay	10.0	10.0
HMWPEO	-	0.1
Enzyme of the invention	0.10	0.05
Silicate	3.0	5.0
Carbonate	10.0	10.0
Granular suds suppressor	1.0	4.0
CMC	0.2	0.1
Water/Minors	Up to 100%	

Detergent Example V

Heavy duty liquid fabric cleaning compositions in accordance with the invention may be prepared as follows:

	I	II
LAS acid form	-	25.0
Citric acid	5.0	2.0
25AS acid form	8.0	-
25AE2S acid form	3.0	-
25AE7	8.0	-
CFAA	5	-

DETPMP	1.0	1.0
Fatty acid	8	-
Oleic acid	-	1.0
Ethanol	4.0	6.0
5 Propanediol	2.0	6.0
Enzyme of the invention	0.10	0.05
Coco-alkyl dimethyl hydroxy ethyl ammonium chloride	-	3.0
10 Smectite clay	-	5.0
PVP	2.0	-
Water / Minors	Up to 100%	

Cellulolytic Activity

15   The cellulolytic activity may be measured in endo-cellulase
units (ECU), determined at pH 7.5, with carboxymethyl cellulose
(CMC) as substrate.

     The ECU assay quantifies the amount of catalytic activity
present in the sample by measuring the ability of the sample to
20 reduce the viscosity of a solution of carboxy-methylcellulose
(CMC). The assay is carried out at 40°C; pH 7.5; 0.1M phosphate
buffer; time 30 min; using a relative enzyme standard for reduc-
ing the viscosity of the CMC Hercules 7 LFD substrate; enzyme
concentration approx. 0.15 ECU/ml. The arch standard is defined
25 to 8200 ECU/g.

EXAMPLE 1

A. Wet storage test for cellulases

     The following example is intended to describe the inven-
30 tion that different inverting endoglucanases may differ signifi-
cantly in respect to their ability to cause fabric weakening
upon wet storage.

     To illustrate that major differences can be observed be-
tween inverting endoglucanases from different cellulase families
35 the following experiment can be made:

     A new bleached wowen cotton (app. 350 g/m2) swatch
(25cmx25cm) is incubated at elevated dosage (100 kECU/l) for 7
days in Tris buffer pH 7 at 25°C and after this prolonged incu-
bation the fabric is rinsed in MilliQ-water (25°C) for 10 min-

utes, line-dried and equilibrated in a constant climate room (60%RH, 20°C) for 48 hours. Finally the loss in tensile strength is measured on an Instron.

The relative tensile strength loss (%TSL) is quantified
5 versus "enzyme blank", i.e. an experiment where the fabric is incubated in buffer without any enzyme present and the cellulase is then classified into one of the following 4 groups:

Class A (%TSL is in the range of [0%-25%])
10 Class B (%TSL is in the range of [25%-50%])
Class C (%TSL is in the range of [50%-75%])
Class D (%TSL is in the range of [75%-100%])

In the following example two inverting endoglucanases were
15 tested:
a. ⁻43 kD EGV from the fungal species *Humicola insolens*, DSM 1800, belonging to family 45 of glycosyl hydrolases and de- scribed in detail in WO 91/17243.
b. EGVI from the fungal species *Humicola insolens*, DSM
20 1800, belonging to the cellulase family 6 and having the amino acid sequence listed in SEQ ID NO:4. The DNA sequence encoding for this enzyme is listed in SEQ ID NO:3 (the coding region cor- responding to positions 16-1356).

25   The following results were obtained from the evaluation:
Enzyme   Tensile strength class
EG V   C
EG VI   A
It is thus found that the cellulase belonging to family 6 is much less prone to cause tensile strength loss upon prolonged wet storage.

30 **B. Colour Clarification in Terg-O-Meter**
In this example the capability of family 6 endogluca- nases to rejuvenate the colour of cotton textile is demonstrated using an assay for determining colour care benefits, i.e. "Color Clarification", of cotton cloth in a miniaturised washing ma-
35 chine, the 100 ml Terg-O-Meter.

250 ml beakers with 100 ml buffer (or detergent) eas posi-
tioned in a Terg-O-Meter and equilibrated to 35°C. Then two 7x7
cm swatches of black, woven cotton cloth was added to each
beaker, the stirrers were put in motion, and finally enzyme was
5 added: A) A blank, B) Three different dosages of a standard
(e.g. the commercial available enzyme preparation Celluzyme™),
and C) Two different dosages of the family 6 endoglucanase. In-
cubation then proceeded for 30 minutes at 35°C

After the 30 minutes of incubation the swatches were rinsed
10 in cold tap water for 10 minutes and dried in a tumble dryer.

The cycle of incubation and rinsing/drying was repeated
once – or until the swatches clearly differed in respect to col-
our and/or fuzz in the swatches surface.

Finally the swatches were graded against the blank (no en-
15 zyme) and the standard (e.g. Celluzyme) swatches. Visual grading
was performed by a panel of trained graders, and colour was
measured with a remission spectrometer. Results are expressed in
the table below as "Colour Clarification" (CC) of the swatches
obtained per activity unit of enzyme.

20

Enzyme	Cellulase Family	CC – black, woven
Celluzyme™	multi-component	1.0
Blank	no enzyme	0.0
Humicola insolens EG VI	Family 6	0.8

EXAMPLE 2
"Colour Clarification" in Household Laundering
25   The capability of a family 6 endoglucanase to rejuvenate
the colour of cotton textile was demonstrated using an assay for
determining "Colour Clarification" of cotton cloth in a normal
household washing machine.

Swatches of 7x7 cm swatches of black, woven cotton cloth
30 were stapled to one common piece of cloth, and 7x7 cm swatches
of blue knitted cotton cloth was stapled to another piece of

cloth. This together with a standardised household load of laun-
dry cloth was entered into a household washing machine.

Such loads were laundered in pH 7 buffer, and at the rele-
vant step in the washing cycle enzyme was added: A) A blank, B)
5 Three different dosages of a standard (e.g. the commercially
available cellulase preparation Celluzyme™), and C) Two differ-
ent dosages of the family 6 endoglucanase.

After laundering the loads were dried in a tumble dryer,
and the cycle of incubation and rinsing/drying were repeated for
10 a total of 14 times.

Finally the swatches were graded against the blank (no en-
zyme) and the standard (e.g. Celluzyme™) swatches. Visual grad-
ing was performed by a panel of trained graders, and colour was
measured with a remission spectrometer. Results are expressed in
15 the table below as "Colour Clarification" (CC) of the swatches
obtained per activity unit of enzyme.

Enzyme	CC - black, woven (rejuvenation)
Celluzyme™	0.6
Blank	0.0
Humicola insolens EG VI	1.6

20 **EXAMPLE 3**

Cloning of *Humicola insolens* Cel6A and EG VI (Cel6B)
Cel6A and B cDNA clones were identified in a *Humicola in-
solens* cDNA expression library (disclosed in WO 91/17244 (Cel6A)
and WO93/11249(Cel6B)).

25 The expression plasmids for cel6A and B (pCA6H and pC6H)
were constructed by PCR addition of adequate restrictions sites
(BamHI-XbaI) to the individual CDS's, and introduction into
XbaI- BamHI cut pCaHj418 vector. The resulting DNA sequences
from BamHI- XbaI are given in Figures 2 and 3, respectively (the
30 translational initiation codon is underlined in each sequence).

Cel6B (& cel6A) variants with the exeption of larger
deletions/inserts (>9bp) were constructed by application of the

Chameleon™ Double-stranded, site-directed Mutagenesis kit, from
Stratagene. The following synthetic oligo-nucleotide were used
as selection primer:

   S/M GAATGACTTGGTTGACGCGTCACCAGTCAC, or

5 M/S GAATGACTTGGTTGAGTACTCACCAGTCAC.

   S/M replaces the ScaI site in the beta-lactamase gene of
the plasmid with a MluI site and M/S does the reverse. The later
is used to introduce secondary mutations in variants generated
by the first selection primer.

10   CA6H4 and 5 were made by SOE PCR utilizing the following
primers:

CA6H4-F: 5' GGTGAGTGCGACGGCTGCGGTCTGGAGGCTGGCCAGTTT
     AATGAATATTTCATTCAGTTGCTGCG

CA6H4-R: 5' CGCAGCAACTGAATGAAATATTCATTAAACTGGCCAGCCTC

15 CAGACCGCAGCCGTCGCACTCACC

 CA6H5-F: 5' GGTGAGTGCGACGGCTGCATCGCCGGCGCTGGCCAGTTTA
     ATGAATATTTCATTCAGTTGCTGCG

 CA6H5-R: 5' CGCAGCAACTGAATGAAATATTCATTAAACTGGCCAGCGCC
     GGCGATGCAGCCGTCGCACTCACC

20 TAKA-F: 5' CGACAACATCACATCAAGCTCTCC

 TAKA-R: 5' CCCCATCCTTTAACTATAGCGAAATGG

   With pCA6H as template (10 ng/100 ml), Pwo (Boehringer)
based PCR reactions were performed, under standard conditions,
as recommended by the manufactor, with the following primer

25 pairs:

   1: TAKA-F/CA6H4-R

   2: TAKA-R/CA6H4-F

   3: TAKA-F/CA6H5-R

30   4: TAKA-R/CA6H5-F

96°C, 2' - 4x(94 °C,30''- 50°C, 30''- 72°C, 45'') - 25x(94
°C,30''- 57°C, 30''- 72°C, 45'') -72°C, 7'- 4°C, hold

   The resulting products, 1&3 1398 bp, 2&4 153 bp were puri-
fied via agarose gel electrophoresis and applied in two new

35 PCR's with templates as listed about 0.1 pmol/100 ml each:

   5: PCR1prod.+ PCR2prod

   6: PCR3prod.+ PCR4prod

and TAKA-F/R as primers: 96°C, 2' - 4x(94 °C, 30''-72°C, 30''-
72°C, 45'') - 20x(94 °C, 30''-57°C, 30''- 72°C, 45'') -72°C,
7'- 4°C, hold.

     The resulting products of 1477 bp were purified via agaro-
5 se gel elctrophoresis, subjected to BamH1-Xba1 restriction nu-
clease digestions and the resulting 1365 bp bands isolated as
above and cloned into pCaHj418 Xba1 - BamH1 vector.

10 EXAMPLE 4
Trimming of binding cleft loops to increase activity
     In order to alter *Humicola insolens* Cel6A to a *Humicola* en-
doglucanase type in order to create an enzyme having improved
performance in colour clarification, mutations which reduce the
15 length of one or more of the binding cleft encompassing loops
was performed. The extent of the binding cleft encompassing
loops can be determined either from the multiple sequence align-
ment or by solving the three dimensional X-ray structure of *Hu-
micola insolens* Cel6A and perform the same analysis as described
20 for *Humicola insolens* EGIV (Cel6B).

     From the sequence alignment in fig. 1A/B the binding cleft
loop regions of *Humicola insolens* Cel6A can be found as shown in
Fig. 6.

     The same analysis could be performed by solving the X-ray
25 structure of *Humicola insolens* Cel6A catalytic core domain and
performing the same analysis as described for the X-ray structu-
re of *Humicola insolens* EG VI (Cel6B) catalytic core domain. In
this case the result is a little different as shown in Fig. 7.

     The four longer loops encompassing the binding cleft
30 (residues Y86-N107, N219-D242, L272-P287 or W308-F331 using *Hu-
micola insolens* Cel6B numbering) are in the numbering scheme of
Humicola insolens Cel6A V173-N195, N307-D330, K360-G376 and
W397-F435 (using *Humicola insolens* Cel6A numbering) when the
multiple sequence alignment method is used and it is Y174-N195,
35 N307-D330, K360-Y391 and W397-F435 F435 (using *Humicola insolens*
Cel6A numbering) when the X-ray structure method is used.
Constructions of loop trimming:
     In one example (A) the loop W397-F435 (using *Humicola in-
solens* Cel6A numbering) which is equivalent to the W308-F331 in

Humicola insolens Cel6B is mutagenized altering the sequence
from

WVKPGGECDG<u>TSDTTAARYDYH</u>CGLE<u>DALKPAPE</u>AGQWF

to

5   WVKPGGECDGCGLEAGQF

(the underlined residues have been deleted)
thereby making the binding cleft more accessible and generating
color care activity for the variant.

In another example (B) the same loop is shortened as in
10 (A) and three extra mutations is introduced to alter the loop
geometry (G420I+L421A+E422G in *Humicola insolens* Cel6A numbe-
ring):

WVKPGGECDG<u>TSDTTAARYDYH</u>CGLE<u>DALKPAPE</u>AGQWF

to

15   WVKPGGECDGC**IAG**AGQF

(A) and (B) were made by SOE PCR as described in example 3.

In a similar manner, the cel6A-type cellulases from the
species *Fusarium oxysporum, Trichoderma reesei, Agaricus bis-
pora, Acremonium cellulyticus, Phanerochaete chrysosporium,*
20 *Penicillium purpurogenum* which are aligned in fig. 1A/B can be
altered to a *Humicola* endoglucanase type enzyme (Cel6B-type).

EXAMPLE 5
Resistance to anionic surfactants in detergent.
25   As described it is possible to stabilize an enzyme against
denaturation by anionic tensides by mutation/deletion of surface
exposed residue(s) towards more negatively charged residue(s)
i.e. removal of positively charged residue(s) and/or the intro-
duction of negatively charged residue(s).
30 <u>Resistance to anionic surfactants in detergent (A)</u>
Variants of the present invention may show improved
performance with respect to an altered sensitivity towards anio-
nic surfactants (tensides). Anionic tensides are products frequ-
ently incorporated into detergent compositions. Unfolding of
35 cellulases tested so far, is accompanied by a decay in the in-
trinsic fluorescence of the proteins. The intrinsic fluorescence
derives from Trp side chains (and to a smaller extent Tyr side
chains) and is sensitive to the hydrophobicity of the side chain
environment. Unfolding leads to a more hydrophilic environment

as the side-chains become more exposed to solvent, and this qu-
enches fluorescence.

Fluorescence is followed on a Perkin/Elmer™ LS50 lumine-
scence spectrometer. In practice, the greatest change in fluore-
5 scence on unfolding is obtained by excitation at 280 nm and
emission at 340 nm. Slit widths (which regulate the magnitude of
the signal) are usually 5 nm for both emission and excitation at
a protein concentration of 5 μg/ml. Fluorescence is measured in
2-ml quartz cuvettes thermostatted with a circulating water bath
10 and stirred with a small magnet. The magnet-stirrer is built in-
to the spectrometer.

Unfolding can be followed in real time using the availa-
ble software. Rapid unfolding (going to completion within less
than 5-10 minutes) is monitored in the TimeDrive option, in
15 which the fluorescence is measured every few (2-5) seconds. For
slower unfolding, four cuvettes can be measured at a time in the
cuvette-holder using the Wavelength Program option, in which the
fluorescence of each cuvette is measured every 30 seconds. In
all cases, unfolding is initiated by adding a small volume
20 (typically 50 μl) of concentrated enzyme solution to the thermo-
statted cuvette solution where mixing is complete within a few
seconds due to the rapid rotation of the magnet.

Data are measured in the software program GraphPad
Prism. Unfolding fits in all cases to a single-exponential
25 function from which a single half-time of unfolding (or unfol-
ding rate constant) can be obtained. Typical unfolding conditi-
ons are 50 mM HEPES pH 7, 0-500 ppm LAS/250 ppm LAS, 25°C.
In both cases, the protein concentration is 5-10 μg/ml (the pro-
tein concentration is not crucial, as LAS is in excess).
30

Enzyme	$t_{\frac{1}{2}relative}$
Humicola insolens Cel6B	100%
Humicola insolens Cel6B/K20E	170%
Humicola insolens Cel6B/K103E	156%
Humicola insolens Cel6B/Q318E	436%

From this table it is seen that mutation of residues resul-
ting in the removal of positively charged residue(s) and/or the

introduction of negatively charged residue(s) increase the resistance towards LAS.

Resistance to anionic surfactants in detergent (B)

The alteration of the surface electrostatics of an enzyme
5 will influence the sensibility towards anionic tensides such as
LAS (linear alkylbenzenesulfonate). Especially variants where
positive charged residues have been removed and/or negatively
charged residues have been introduced will increase the resistance towards LAS, whereas the opposite, i.e. the introduction
10 of positively charged residues and/or the removal of negatively
charged residues will lower the resistance towards LAS. The residues Arg (R), Lys (K) and His (H) are viewed as positively or
potentially positively charged residue and the residues Asp (D),
Glu (E) and Cys (C) if not included in a disulphide bridge are
15 viewed as negatively or potentially negatively charged residues.
Positions already containing one of these residues are the primary target for mutagenesis, secondary targets are positions
which has one of these residues on an equivalent position in
another cellulase, and third target are any surface exposed re-
20 sidue. In this experiment wild type *Humicola insolens* Cel6B cellulase are being compared to *Humicola insolens* Cel6B cellulase
variants belonging to all three of the above groups, comparing
the stability towards LAS in detergent.

Cellulase resistance to anionic surfactants was measured as
25 activity on PASC (phosphoric acid swollen cellulose) in the presence of anionic surfactant vs. activity on PASC in the absence
of anionic surfactant.

The reaction medium contained 5.0 g/l of a commercial regular powder detergent from the detergent manufacturer NOPA Den-
30 mark. The detergent was formulated without surfactants for this
experiment and pH adjusted to pH 7.0. Further the reaction medium included 0.5 g/l PASC and was with or without 1 g/l LAS
(linear alkylbenzenesulphonate), which is an anionic surfactant,
and the reaction proceeded at the temperature 30°C for 30 minu-
35 tes. Cellulase was dosed at 0.20 S-CEVU/l. After the 30 minutes
of incubation the reaction was stopped with 2 N NaOH and the
amount of reducing sugar ends determined through reduction of p-
hydroxybenzoic acid hydrazide. The decrease in absorption of re-

duc d p-hydroxybenzoic acid hydrazide relates to the cellulas activity.

The type of mutation and the resistance towards LAS for variants with increased LAS resistance is summarized in the fol-
5   lowing table:

Variant	Relative LAS resistance [%]
Humicola insolens Cel6B	100
Humicola insolens Cel6B/S56D	122
Humicola insolens Cel6B/K103E	123
Humicola insolens Cel6B/Q138E	113

From this table it is seen that mutation of residues re-
sulting in the removal of positively charged residue(s) and/or the introduction of negatively charged residue(s) increase the
10 resistance towards LAS.

EXAMPLE 6
Improving stability towards anionic surfactants of any *Humicola-*
like family 6 cellulase
15   In order to stabilize any *Humicola*-like family 6 cellulase towards anionic surfactants, residues on the surface of the mo-
lecule should be mutated towards a more negatively charged sur-
face as described in the text resulting in the removal of posi-
tively charged residue(s) and/or introduction of negatively
20 charged residue(s). The residues on the surface of the molecule can be detected from the multiple sequence alignment in the fol-
lowing way: Residues at a position in the sequence equivalent to residues on the surface of the *Humicola insolens* Cel6A X-ray structure are thought to most likely be on the surface of a gi-
25 ven family 6 cellulase. In the case of an insertion the inserted residue(s) are considered as being on the surface of the molecu-
le if one of the flanking residues of the insertion is conside-
red as being on the surface.

To achieve improved performance of the enzyme in color
30 clarification a linker and a CBD have to bee attached to the ca-
talytic core domain. In the cases where the wild type enzyme do-
es not include the linker region and/or the CBD these segments

can be included from another enzyme e.g. *Humicola insolens* Cel6B by standard techniques to achive a hybrid enzyme with the desired improved properties.

(A) *Neocallimastix patriciarum*

5   Taking the *Neocallimastix patriciarum* SPTREMBL entry q12646 as an example figure 8 shows the residues considered as being on the surface of the *Neocallimastix patriciarum* catalytic core domain.

Preferably potentially positively charged residues should
10 be mutagenized to neutral or negatively charged residues. In the case of *Neocallimastix patriciarum* this results to (using the numbering scheme of *Humicola insolens* Cel6B): K4, K16, R27, K43, K45, K67, K72, R91, K113, R122, R125, K131, R156, H159, K160, H183, K195, K201, K212, R214, K249, H262, R293, R295, K310,
15 R318e, R323c, H332, R340, R343.

More preferably the positions which hold an Arg: R27, R91, R122, R125, R156, R214, R293, R295, R318e, R323c, R340 or R343.

Or preferably positions which in other *Humicola*-like family 6 cellulases have been shown to improve stability towards
20 anionic tensides.

(B) *Orpinomyces sp.* CelA

Taking the *Orpinomyces sp.* CelA SPTREMBL entry p78720 (residues 128-459) as an example figure 9 shows the residues considered as being on the surface of the *Orpinomyces sp.* CelA
25 catalytic core domain.

Preferably potentially positively charged residues should be mutagenized to neutral or negatively charged residues. In the case of *Orpinomyces sp.* CelA this results to (using the numbering scheme of *Humicola insolens* Cel6B): K16, K26, K27, K38,
30 K40, K43, K45, K72, K111, K113, K128, K131, R153, R156, H159, K160, K169, H174, K176, H183, K201, K212, R214, K245, H247, R252, K257, R260, K262, R269, K286, R293, K295, K310, R318e, R321 or H332.

More preferably the positions which hold an Arg: R153,
35 R156, R214, R252, R260, R269, R293, R318e or R321.

Or preferably positions which in other *Humicola*-like family 6 cellulases have been shown to improve stability towards anionic tensides (surfactants).

(C) *Orpinomyces sp.* CelC

Taking the *Orpinomyces sp.* CelC SPTREMBL entry p78721
(residues 127-449) as an example figure 10 shows the residues
considered as being on the surface of the *Orpinomyces sp.* CelA
5 catalytic core domain.

Preferably potentially positively charged residues should
be mutagenized to neutral or negatively charged residues. In the
case of *Orpinomyces sp.* CelC this results to (using the numbe-
ring scheme of *Humicola insolens* Cel6B): K16, R27, K42, K43,
10 R64, K72, R91, R131, H156, H159, K160, K169, K173, R176, H183,
R195, R205, K212, R214, H247, R252, R257, R260, K262, R272,
K286, R293, K310, R320 or H332.

More preferably the positions which hold an Arg: R27, R64,
R91, R131, R176, R195, R205, R214, R252, R257, R260, R272, R293
15 or R320.

Or preferably positions which in other *Humicola*-like family
6 cellulases have been shown to improve stability towards anio-
nic tensides (surfactants).

20 EXAMPLE 7
Alteration of pH activity profile

The pH activity profile of a cellulase is governed
by the pH dependent behavior of specific titratable groups, ty-
pically the acidic residues in the active site. The pH profile
25 can be altered by changing the electrostatic environment of the-
se residues, either by substitution of residues involving char-
ged or potentially charged groups such as Arg (R), Lys (K), Tyr
(Y), His (H), Glu (E), Asp (D) or Cys (C) if not involved in a
disulphide bridge or by changes in the surface accessibility of
30 these specific titratable groups by mutation of these specific
residues on the surface of the enzyme close to the proton donor
as described above or by mutation of residues in the vicinity of
the binding cleft as described herein, preferably by mutation(s)
in the binding cleft within 5Å, more preferably 2.5Å, of the
35 substrate, or preferably by mutations within 10Å, more prefe-
rably 5Å, from the active site (D139).

In this example *Humicola insolens* Cel6B cellulase and
variants of *Humicola insolens* Cel6B cellulase involving substi-

tution of charged or potentially charged residues have been te-
sted for activity towards PASC at pH 7 and pH 10, respectively.

In order to determine the pH optimum for cellulases we have
selected organic buffers because it is common known that e.g.
5 borate forms covalent complexes with mono- and oligo-saccharides
and phosphate can precipitate with Ca-ions. In DATA FOR
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page 223 to 241, suitable organic buffers has been found. In
respect of their pKa values we decided to use Na-acetate in the
10 range 4 - 5.5, MES at 6.0, MOPS in the range 6.5 - 7.5, Na-
barbiturate 8.0 - 8.5 and glycine in the range 9.0 - 10.5.

<u>Method:</u>

The method is enzymatic degradation of carboxy-methyl-
cellulose, at different pH's. Buffers are prepared in the range
15 4.0 to 10.5 with intervals of 0.5 pH unit. The analyze is based
on formation of new reducing ends in carboxy-methyl-cellulose,
these are visualized by reaction with PHBAH in strong alkaline
environment, were they forms a yellow compound with absorption
maximum at 410 nm.

20 <u>Experimental Protocol:</u>

Buffer preparation: 0.2 mol of each buffer substance is
weighed out and dissolved in 1 liter of Milli Q water. 250 ml
0.2M buffer solution and 200 ml Milli Q water is mixed. The pH
are measured using Radiometer PHM92 labmeter calibrated using
25 standard buffer solutions from Radiometer. The pH of the buffers
are adjusted to actual pH using 4M NaOH or 4M HCl and adjusted
to total 500 ml with water. When adjusting Na-barbiturate to pH
8.0 there might be some precipitation, this can be re-dissolved
by heating to 50°C.

30 Acetic acid 100% 0.2 mol = 12.01 g.

MES 0.2 mol = 39.04 g.

MOPS 0.2 mol = 41.86 g.

Na-barbiturate 0.2 mol = 41.24 g.

Glycine 0.2mol = 15.01 g.

35 <u>Buffers:</u> as disclosed in WO 98/12307, page 89.

The actual pH is measured in a series treated as the main
values, but without stop reagent, pH is measured after 20 min.
incubation at 40 °C.

Substrate Preparation:

2.0 g CMC , in 250 ml conic glass flask with a magnet rod, is moistened with 2.5 ml. 96% ethanol, 100 ml. Milli Q water is added and then boiled to transparency on a heating magnetic
5 stirrer. Approximately 2 min. boiling. Cooled to room temperature on magnetic stirrer.

Stop Reagent:

1.5 g PHBAH and 5 g K-Na-tartrate dissolved in 2% NaOH.

Procedure:

10   There are made 3 main values and 2 blank value using 5 ml glass test tubes. (1 main value for pH determination)

	Main values	Blank value
Buffer	1.0 ml.	1.0 ml.
Substrate CMC	0.75 ml.	0.75 ml.
Mix	5 sec.	5 sec.
Preheat	10 min./40°C.	-
Enzyme	0.25 ml.	-
Mix	5 sec.	-
Incubation	20 min./ 40°C.	room temp.
PHBAH-reagent	1 ml.	1 ml.
Mix	5 sec.	-
Enzyme	-	0.25 ml.
Mix	-	5 sec.

Mixing on a Heidolph REAX 2000 mixer with permanent mix and maximum speed (9). No stirring during incubation on water bath
15 with temperature control. Immediately after adding PHBAH-reagent and mixing the samples are boiled 10 min. Cooled in cold tap water for 5 min. Absorbance read at 410 nm.

Determination of Activity

20   The absorbance at 410 nm from the 2 Main values are added and divided by 2 and the 2 Blank values are added and divided by 2, the 2 mean values are subtracted. The percentages are calculated by using the highest value as 100%.

The measured pH is plotted against the relative activity.
25 Buffer reagents as disclosed in WO98/12307, page 90.

Cellulase resistance to anionic surfactants was measured as
activity on PASC (phosphoric acid swollen cellulose) at neutral
pH (pH 7.0) vs. activity on PASC at alkaline pH (pH 10.0).
The reaction medium contained 5.0 g/l of a commercial regular
5 powder detergent from the detergent manufacturer NOPA Denmark.
The pH was adjusted to pH 7.0 and pH 10.0, respectively. Further
the reaction medium included 0.5 g/l PASC, and the reaction pro-
ceeded at the temperature 30°C for 30 minutes. Cellulase was do-
sed at 0.20 S-CEVU/l. After the 30 minutes of incubation the re-
10 action was stopped with 2 N NaOH and the amount of reducing su-
gar ends determined through reduction of p-hydroxybenzoic acid
hydrazide. The decrease in absorption of reduced p-
hydroxybenzoic acid hydrazide relates to the cellulase activity.
        The results are presented below, the activity at pH 10 re-
15 lative to pH 7 is compared to that of wild type *Humicola inso-
lens* Cel6B cellulase.

Variant	PASC activity
	pH10/pH7 relative to wild type
	[%]
Humicola insolens	100
Humicola insolens/N183H	400
Humicola insolens/A182G,N183H	250
Humicola insolens/A182G	140

        From the above table it is seen that the relative alkaline
20 activity can be increased by creating variants involving poten-
tially charged residues which are mutated towards a more negati-
vely charged residue and/or by altering residues not more than
5Å from the residues in the binding cleft.

25 EXAMPLE 8

Variants with improved catalytic properties

        The following site directed variants of *Humicola insolens*
Cel6B (EG VI) endoglucanase were prepared as described above:
K20E, K103Q, K103E, S94D, A95G.

30   The specific activity on CMC of the variants and the wild-
type *H. insolens* endoglucanase were measured in the ECU (endo-

cellulase unit) assay (cf. above under "Cellulolytic Activity")
with the following results:

Wild-type	100%
K20E	109%
K103Q	120%
K103E	115%
S94D	180%
A95G	116%

All the tested variants have improved specific activity.

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APPENDIX 1

The structural coordinated of the three-dimensional structure of
the *Humicola insolens* Cel6B catalytic core domain.

5   The structural coordinates of the *Humicola insolens* Cel6B
catalytic core domain as determined by X-ray crystallography.
The format of the coordinates is the conventional *Brookhaven
Protein Data Bank* (PDB) format:

10	ATOM	1	N	GLY	A	3	-1.219	43.542	30.269	1.00 38.26	N
	ATOM	2	CA	GLY	A	3	-2.014	43.426	29.045	1.00 37.85	C
	ATOM	3	C	GLY	A	3	-1.696	42.106	28.320	1.00 30.25	C
	ATOM	4	O	GLY	A	3	-0.625	41.520	28.474	1.00 29.98	O
	ATOM	5	N	ASN	A	4	-2.694	41.653	27.583	1.00 26.24	N
15	ATOM	6	CA	ASN	A	4	-2.522	40.422	26.779	1.00 20.56	C
	ATOM	7	C	ASN	A	4	-1.763	40.898	25.563	1.00 18.81	C
	ATOM	8	O	ASN	A	4	-2.111	41.817	24.819	1.00 18.03	O
	ATOM	9	CB	ASN	A	4	-3.894	39.853	26.486	1.00 25.75	C
	ATOM	10	CG	ASN	A	4	-3.998	38.898	25.313	1.00 25.58	C
20	ATOM	11	OD1	ASN	A	4	-2.969	38.503	24.764	1.00 18.12	O
	ATOM	12	ND2	ASN	A	4	-5.222	38.545	24.933	1.00 25.83	N
	ATOM	13	N	PRO	A	5	-0.620	40.287	25.287	1.00 18.82	N
	ATOM	14	CA	PRO	A	5	0.217	40.707	24.170	1.00 21.77	C
	ATOM	15	C	PRO	A	5	-0.379	40.490	22.795	1.00 19.14	C
25	ATOM	16	O	PRO	A	5	0.116	41.014	21.786	1.00 20.12	O
	ATOM	17	CB	PRO	A	5	1.551	39.962	24.330	1.00 22.32	C
	ATOM	18	CG	PRO	A	5	1.247	38.911	25.348	1.00 27.04	C
	ATOM	19	CD	PRO	A	5	-0.027	39.231	26.096	1.00 23.52	C
	ATOM	20	N	PHE	A	6	-1.420	39.660	22.675	1.00 20.14	N
30	ATOM	21	CA	PHE	A	6	-2.025	39.349	21.392	1.00 18.69	C
	ATOM	22	C	PHE	A	6	-3.168	40.333	21.066	1.00 21.14	C
	ATOM	23	O	PHE	A	6	-3.659	40.333	19.958	1.00 19.59	O
	ATOM	24	CB	PHE	A	6	-2.571	37.924	21.376	1.00 17.61	C
	ATOM	25	CG	PHE	A	6	-1.492	36.869	21.367	1.00 12.55	C
35	ATOM	26	CD1	PHE	A	6	-0.937	36.390	22.554	1.00 17.74	C
	ATOM	27	CD2	PHE	A	6	-1.033	36.378	20.163	1.00 19.19	C
	ATOM	28	CE1	PHE	A	6	0.045	35.415	22.547	1.00 19.08	C
	ATOM	29	CE2	PHE	A	6	-0.017	35.442	20.127	1.00 13.64	C
	ATOM	30	CZ	PHE	A	6	0.496	34.966	21.322	1.00 17.40	C
40	ATOM	31	N	SER	A	7	-3.625	41.041	22.085	1.00 24.32	N
	ATOM	32	CA	SER	A	7	-4.696	42.029	21.934	1.00 25.88	C
	ATOM	33	C	SER	A	7	-4.451	42.995	20.789	1.00 20.85	C
	ATOM	34	O	SER	A	7	-3.459	43.730	20.688	1.00 24.54	O
	ATOM	35	CB	SER	A	7	-4.820	42.841	23.237	1.00 26.78	C
45	ATOM	36	OG	SER	A	7	-6.172	43.198	23.483	1.00 41.47	O
	ATOM	37	N	GLY	A	8	-5.371	42.997	19.824	1.00 26.40	N
	ATOM	38	CA	GLY	A	8	-5.340	43.814	18.652	1.00 24.54	C
	ATOM	39	C	GLY	A	8	-4.269	43.464	17.635	1.00 26.47	C
	ATOM	40	O	GLY	A	8	-4.064	44.173	16.658	1.00 27.08	O
50	ATOM	41	N	ARG	A	9	-3.612	42.315	17.808	1.00 21.06	N
	ATOM	42	CA	ARG	A	9	-2.572	41.872	16.890	1.00 22.18	C
	ATOM	43	C	ARG	A	9	-3.019	40.660	16.083	1.00 18.93	C
	ATOM	44	O	ARG	A	9	-4.011	40.028	16.400	1.00 19.47	O
	ATOM	45	CB	ARG	A	9	-1.284	41.600	17.687	1.00 23.74	C

	ATOM	46	CG	ARG	A	9	-0.655	42.881	18.192	1.00 23.86	C
	ATOM	47	CD	ARG	A	9	0.697	42.725	18.882	1.00 27.92	C
	ATOM	48	NE	ARG	A	9	1.213	44.064	19.199	1.00 27.01	N
	ATOM	49	CZ	ARG	A	9	1.488	44.533	20.404	1.00 37.53	C
5	ATOM	50	NH1	ARG	A	9	1.321	43.763	21.468	1.00 36.85	N
	ATOM	51	NH2	ARG	A	9	1.946	45.781	20.503	1.00 32.23	N
	ATOM	52	N	THR	A	10	-2.288	40.327	15.027	1.00 24.28	N
	ATOM	53	CA	THR	A	10	-2.564	39.132	14.227	1.00 19.42	C
	ATOM	54	C	THR	A	10	-1.354	38.193	14.346	1.00 24.81	C
10	ATOM	55	O	THR	A	10	-0.251	38.690	14.163	1.00 20.25	O
	ATOM	56	CB	THR	A	10	-2.737	39.467	12.744	1.00 26.72	C
	ATOM	57	OG1	THR	A	10	-1.768	40.459	12.367	1.00 25.66	O
	ATOM	58	CG2	THR	A	10	-4.140	40.042	12.529	1.00 28.94	C
	ATOM	59	N	LEU	A	11	-1.572	36.927	14.675	1.00 19.06	N
15	ATOM	60	CA	LEU	A	11	-0.435	35.982	14.697	1.00 19.38	C
	ATOM	61	C	LEU	A	11	0.111	35.848	13.287	1.00 14.73	C
	ATOM	62	O	LEU	A	11	-0.555	35.657	12.279	1.00 15.07	O
	ATOM	63	CB	LEU	A	11	-0.920	34.622	15.217	1.00 16.36	C
	ATOM	64	CG	LEU	A	11	0.196	33.575	15.358	1.00 17.32	C
20	ATOM	65	CD1	LEU	A	11	1.351	33.982	16.269	1.00 18.77	C
	ATOM	66	CD2	LEU	A	11	-0.436	32.245	15.788	1.00 16.40	C
	ATOM	67	N	LEU	A	12	1.444	36.024	13.141	1.00 16.75	N
	ATOM	68	CA	LEU	A	12	2.060	36.058	11.830	1.00 13.59	C
	ATOM	69	C	LEU	A	12	2.020	34.739	11.061	1.00 18.27	C
25	ATOM	70	O	LEU	A	12	2.255	33.691	11.661	1.00 16.05	O
	ATOM	71	CB	LEU	A	12	3.505	36.577	11.950	1.00 14.84	C
	ATOM	72	CG	LEU	A	12	4.283	36.764	10.640	1.00 19.82	C
	ATOM	73	CD1	LEU	A	12	3.878	38.020	9.888	1.00 16.23	C
	ATOM	74	CD2	LEU	A	12	5.779	36.782	10.927	1.00 21.50	C
30	ATOM	75	N	VAL	A	13	1.740	34.836	9.760	1.00 18.01	N
	ATOM	76	CA	VAL	A	13	1.775	33.596	8.958	1.00 15.29	C
	ATOM	77	C	VAL	A	13	3.197	33.038	8.957	1.00 17.10	C
	ATOM	78	O	VAL	A	13	4.189	33.771	8.935	1.00 20.59	O
	ATOM	79	CB	VAL	A	13	1.307	33.883	7.521	1.00 16.36	C
35	ATOM	80	CG1	VAL	A	13	1.842	32.878	6.516	1.00 25.91	C
	ATOM	81	CG2	VAL	A	13	-0.229	33.978	7.423	1.00 20.83	C
	ATOM	82	N	ASN	A	14	3.330	31.716	8.968	1.00 15.04	N
	ATOM	83	CA	ASN	A	14	4.621	31.037	8.860	1.00 17.17	C
	ATOM	84	C	ASN	A	14	4.809	30.806	7.358	1.00 19.93	C
40	ATOM	85	O	ASN	A	14	4.099	30.022	6.721	1.00 15.61	O
	ATOM	86	CB	ASN	A	14	4.611	29.761	9.683	1.00 14.05	C
	ATOM	87	CG	ASN	A	14	5.850	28.897	9.544	1.00 15.07	C
	ATOM	88	OD1	ASN	A	14	6.505	28.972	8.533	1.00 18.33	O
	ATOM	89	ND2	ASN	A	14	6.119	28.082	10.587	1.00 19.81	N
45	ATOM	90	N	SER	A	15	5.772	31.480	6.722	1.00 16.93	N
	ATOM	91	CA	SER	A	15	5.972	31.375	5.291	1.00 19.54	C
	ATOM	92	C	SER	A	15	6.450	30.003	4.841	1.00 19.95	C
	ATOM	93	O	SER	A	15	6.081	29.590	3.731	1.00 19.84	O
	ATOM	94	CB	SER	A	15	6.925	32.465	4.794	1.00 23.25	C
50	ATOM	95	OG	SER	A	15	8.109	32.414	5.573	1.00 23.52	O
	ATOM	96	N	ASP	A	16	7.229	29.316	5.679	1.00 20.02	N
	ATOM	97	CA	ASP	A	16	7.678	27.986	5.233	1.00 18.50	C
	ATOM	98	C	ASP	A	16	6.490	27.032	5.160	1.00 19.89	C
	ATOM	99	O	ASP	A	16	6.297	26.266	4.196	1.00 20.29	O
55	ATOM	100	CB	ASP	A	16	8.749	27.479	6.183	1.00 21.86	C
	ATOM	101	CG	ASP	A	16	9.262	26.115	5.708	1.00 36.14	C
	ATOM	102	OD1	ASP	A	16	9.486	25.883	4.491	1.00 38.17	O
	ATOM	103	OD2	ASP	A	16	9.383	25.267	6.609	1.00 36.83	O
	ATOM	104	N	TYR	A	17	5.686	27.053	6.241	1.00 18.14	N

	ATOM	105	CA	TYR A	17	4.487	26.234	6.264	1.00	16.72	C
	ATOM	106	C	TYR A	17	3.546	26.568	5.133	1.00	15.19	C
	ATOM	107	O	TYR A	17	2.949	25.740	4.432	1.00	16.05	O
	ATOM	108	CB	TYR A	17	3.789	26.452	7.608	1.00	17.07	C
5	ATOM	109	CG	TYR A	17	2.526	25.697	7.890	1.00	13.43	C
	ATOM	110	CD1	TYR A	17	2.341	24.363	7.550	1.00	13.11	C
	ATOM	111	CD2	TYR A	17	1.474	26.357	8.535	1.00	16.87	C
	ATOM	112	CE1	TYR A	17	1.155	23.717	7.871	1.00	13.74	C
	ATOM	113	CE2	TYR A	17	0.283	25.717	8.850	1.00	16.10	C
10	ATOM	114	CZ	TYR A	17	0.148	24.400	8.508	1.00	13.11	C
	ATOM	115	OH	TYR A	17	−1.005	23.712	8.810	1.00	14.15	O
	ATOM	116	N	SER A	18	3.263	27.851	4.904	1.00	15.39	N
	ATOM	117	CA	SER A	18	2.428	28.267	3.776	1.00	18.04	C
	ATOM	118	C	SER A	18	2.941	27.767	2.434	1.00	17.83	C
15	ATOM	119	O	SER A	18	2.158	27.327	1.586	1.00	19.59	O
	ATOM	120	CB	SER A	18	2.354	29.805	3.817	1.00	21.27	C
	ATOM	121	OG A	SER A	18	1.253	30.217	4.608	0.50	27.39	O
	ATOM	122	OG B	SER A	18	1.514	30.236	2.772	0.50	17.06	O
	ATOM	123	N	SER A	19	4.260	27.733	2.243	1.00	17.26	N
20	ATOM	124	CA	SER A	19	4.815	27.191	1.004	1.00	17.67	C
	ATOM	125	C	SER A	19	4.528	25.702	0.844	1.00	17.75	C
	ATOM	126	O	SER A	19	4.127	25.224	−0.225	1.00	18.25	O
	ATOM	127	CB	SER A	19	6.327	27.476	0.932	1.00	20.98	C
	ATOM	128	OG A	SER A	19	6.550	28.864	0.860	0.60	16.86	O
25	ATOM	129	OG B	SER A	19	6.775	27.266	−0.395	0.40	20.68	O
	ATOM	130	N	LYS A	20	4.695	24.963	1.949	1.00	17.13	N
	ATOM	131	CA	LYS A	20	4.459	23.529	1.922	1.00	13.44	C
	ATOM	132	C	LYS A	20	2.999	23.195	1.626	1.00	17.29	C
	ATOM	133	O	LYS A	20	2.697	22.239	0.907	1.00	16.89	O
30	ATOM	134	CB	LYS A	20	4.869	22.910	3.261	1.00	17.94	C
	ATOM	135	CG	LYS A	20	6.366	23.122	3.543	1.00	24.75	C
	ATOM	136	CD	LYS A	20	6.660	22.371	4.825	1.00	22.80	C
	ATOM	137	CE	LYS A	20	7.852	22.839	5.589	1.00	28.68	C
	ATOM	138	NZ	LYS A	20	8.141	21.933	6.735	1.00	22.43	N
35	ATOM	139	N	LEU A	21	2.077	24.008	2.094	1.00	17.11	N
	ATOM	140	CA	LEU A	21	0.653	23.842	1.855	1.00	13.52	C
	ATOM	141	C	LEU A	21	0.270	24.012	0.389	1.00	17.88	C
	ATOM	142	O	LEU A	21	−0.817	23.570	0.016	1.00	16.70	O
	ATOM	143	CB	LEU A	21	−0.161	24.861	2.673	1.00	15.72	C
40	ATOM	144	CG	LEU A	21	−0.303	24.401	4.117	1.00	17.14	C
	ATOM	145	CD1	LEU A	21	−0.813	25.536	5.018	1.00	19.64	C
	ATOM	146	CD2	LEU A	21	−1.222	23.189	4.269	1.00	16.96	C
	ATOM	147	N	ASP A	22	1.128	24.695	−0.366	1.00	18.31	N
	ATOM	148	CA	ASP A	22	0.822	24.788	−1.808	1.00	17.60	C
45	ATOM	149	C	ASP A	22	0.638	23.406	−2.411	1.00	20.83	C
	ATOM	150	O	ASP A	22	−0.254	23.185	−3.245	1.00	20.39	O
	ATOM	151	CB	ASP A	22	1.881	25.579	−2.571	1.00	17.76	C
	ATOM	152	CG	ASP A	22	1.220	26.464	−3.611	1.00	28.60	C
	ATOM	153	OD1	ASP A	22	0.380	27.281	−3.181	1.00	23.59	O
50	ATOM	154	OD2	ASP A	22	1.538	26.321	−4.821	1.00	24.61	O
	ATOM	155	N	GLN A	23	1.421	22.406	−1.967	1.00	18.04	N
	ATOM	156	CA	GLN A	23	1.235	21.045	−2.460	1.00	19.08	C
	ATOM	157	C	GLN A	23	−0.185	20.580	−2.188	1.00	21.56	C
	ATOM	158	O	GLN A	23	−0.830	19.948	−3.036	1.00	22.98	O
55	ATOM	159	CB	GLN A	23	2.218	20.086	−1.768	1.00	19.16	C
	ATOM	160	CG	GLN A	23	2.036	18.643	−2.223	1.00	25.29	C
	ATOM	161	CD	GLN A	23	3.155	17.731	−1.760	1.00	30.48	C
	ATOM	162	OE1	GLN A	23	3.144	16.538	−2.090	1.00	28.64	O
	ATOM	163	NE2	GLN A	23	4.122	18.234	−1.013	1.00	17.97	N

	ATOM	164	N	THR	A	24	-0.712	20.919	-0.992	1.00	17.27	N
	ATOM	165	CA	THR	A	24	-2.063	20.490	-0.634	1.00	17.10	C
	ATOM	166	C	THR	A	24	-3.098	21.160	-1.512	1.00	20.53	C
	ATOM	167	O	THR	A	24	-4.054	20.548	-1.974	1.00	20.84	O
5	ATOM	168	CB	THR	A	24	-2.364	20.775	0.866	1.00	12.75	C
	ATOM	169	OG1	THR	A	24	-1.188	20.411	1.618	1.00	18.44	O
	ATOM	170	CG2	THR	A	24	-3.525	19.954	1.375	1.00	16.82	C
	ATOM	171	N	ARG	A	25	-2.957	22.462	-1.681	1.00	21.00	N
	ATOM	172	CA	ARG	A	25	-3.821	23.238	-2.549	1.00	17.91	C
10	ATOM	173	C	ARG	A	25	-3.739	22.679	-3.965	1.00	19.93	C
	ATOM	174	O	ARG	A	25	-4.831	22.459	-4.486	1.00	24.01	O
	ATOM	175	CB	ARG	A	25	-3.388	24.704	-2.613	1.00	21.80	C
	ATOM	176	CG	ARG	A	25	-4.578	25.612	-2.940	1.00	27.75	C
	ATOM	177	CD	ARG	A	25	-3.977	27.048	-3.098	1.00	31.43	C
15	ATOM	178	NE	ARG	A	25	-3.193	26.903	-4.331	1.00	36.58	N
	ATOM	179	CZ	ARG	A	25	-3.849	26.988	-5.499	1.00	38.46	C
	ATOM	180	NH1	ARG	A	25	-5.138	27.272	-5.631	1.00	41.76	N
	ATOM	181	NH2	ARG	A	25	-3.095	26.750	-6.543	1.00	22.34	N
	ATOM	182	N	GLN	A	26	-2.539	22.412	-4.480	1.00	18.69	N
20	ATOM	183	CA	GLN	A	26	-2.482	21.757	-5.798	1.00	22.07	C
	ATOM	184	C	GLN	A	26	-3.191	20.412	-5.836	1.00	26.43	C
	ATOM	185	O	GLN	A	26	-3.894	20.096	-6.817	1.00	24.10	O
	ATOM	186	CB	GLN	A	26	-0.997	21.539	-6.162	1.00	22.74	C
	ATOM	187	CG	GLN	A	26	-0.280	22.867	-6.444	1.00	21.81	C
25	ATOM	188	CD	GLN	A	26	1.223	22.710	-6.460	1.00	26.15	C
	ATOM	189	OE1	GLN	A	26	2.014	23.650	-6.360	1.00	29.54	O
	ATOM	190	NE2	GLN	A	26	1.731	21.487	-6.570	1.00	28.77	N
	ATOM	191	N	ALA	A	27	-3.069	19.553	-4.823	1.00	22.76	N
	ATOM	192	CA	ALA	A	27	-3.702	18.238	-4.801	1.00	22.86	C
30	ATOM	193	C	ALA	A	27	-5.214	18.331	-4.878	1.00	26.56	C
	ATOM	194	O	ALA	A	27	-5.876	17.654	-5.683	1.00	29.72	O
	ATOM	195	CB	ALA	A	27	-3.266	17.435	-3.575	1.00	21.10	C
	ATOM	196	N	PHE	A	28	-5.822	19.221	-4.098	1.00	24.85	N
	ATOM	197	CA	PHE	A	28	-7.262	19.417	-4.131	1.00	23.17	C
35	ATOM	198	C	PHE	A	28	-7.673	19.939	-5.510	1.00	24.62	C
	ATOM	199	O	PHE	A	28	-8.581	19.365	-6.109	1.00	31.47	O
	ATOM	200	CB	PHE	A	28	-7.720	20.401	-3.055	1.00	17.75	C
	ATOM	201	CG	PHE	A	28	-7.884	19.772	-1.700	1.00	20.87	C
	ATOM	202	CD1	PHE	A	28	-8.654	18.639	-1.493	1.00	18.88	C
40	ATOM	203	CD2	PHE	A	28	-7.183	20.333	-0.634	1.00	17.62	C
	ATOM	204	CE1	PHE	A	28	-8.766	18.080	-0.228	1.00	23.06	C
	ATOM	205	CE2	PHE	A	28	-7.315	19.775	0.637	1.00	17.25	C
	ATOM	206	CZ	PHE	A	28	-8.091	18.678	0.843	1.00	19.95	C
	ATOM	207	N	LEU	A	29	-6.970	20.945	-6.032	1.00	23.80	N
45	ATOM	208	CA	LEU	A	29	-7.312	21.458	-7.359	1.00	32.14	C
	ATOM	209	C	LEU	A	29	-7.335	20.339	-8.402	1.00	35.33	C
	ATOM	210	O	LEU	A	29	-8.298	20.213	-9.177	1.00	35.15	O
	ATOM	211	CB	LEU	A	29	-6.325	22.512	-7.803	1.00	29.77	C
	ATOM	212	CG	LEU	A	29	-6.540	23.986	-7.615	1.00	35.01	C
50	ATOM	213	CD1	LEU	A	29	-5.522	24.766	-8.416	1.00	34.32	C
	ATOM	214	CD2	LEU	A	29	-7.957	24.417	-7.890	1.00	39.08	C
	ATOM	215	N	SER	A	30	-6.344	19.464	-8.396	1.00	34.71	N
	ATOM	216	CA	SER	A	30	-6.204	18.354	-9.322	1.00	37.80	C
	ATOM	217	C	SER	A	30	-7.277	17.288	-9.316	1.00	38.86	C
55	ATOM	218	O	SER	A	30	-7.306	16.359	-10.139	1.00	38.27	O
	ATOM	219	CB	SER	A	30	-4.825	17.723	-9.056	1.00	38.75	C
	ATOM	220	OG	ASER	A	30	-3.831	18.716	-9.316	0.50	38.25	O
	ATOM	221	OG	BSER	A	30	-4.948	16.650	-8.135	0.50	44.07	O
	ATOM	222	N	ARG	A	31	-8.204	17.328	-8.380	1.00	35.46	N

ATOM	223	CA	ARG A	31	-9.349	16.448	-8.287	1.00	32.92		C
	ATOM	224	C	ARG A	31	-10.619	17.277	-8.477	1.00	34.41	C
	ATOM	225	O	ARG A	31	-11.715	16.814	-8.172	1.00	36.73	O
	ATOM	226	CB	ARG A	31	-9.378	15.675	-6.979	1.00	37.41	C
5	ATOM	227	CG	ARG A	31	-8.085	14.880	-6.791	1.00	30.23	C
	ATOM	228	CD	ARG A	31	-8.224	13.944	-5.620	1.00	38.62	C
	ATOM	229	NE	ARG A	31	-8.688	14.611	-4.394	1.00	36.87	N
	ATOM	230	CZ	ARG A	31	-7.839	14.794	-3.375	1.00	38.36	C
	ATOM	231	NH1	ARG A	31	-6.572	14.397	-3.497	1.00	24.37	N
10	ATOM	232	NH2	ARG A	31	-8.280	15.378	-2.275	1.00	39.97	N
	ATOM	233	N	GLY A	32	-10.453	18.524	-8.901	1.00	30.79	N
	ATOM	234	CA	GLY A	32	-11.568	19.435	-9.124	1.00	32.88	C
	ATOM	235	C	GLY A	32	-12.219	19.961	-7.851	1.00	34.01	C
	ATOM	236	O	GLY A	32	-13.269	20.611	-7.881	1.00	29.91	O
15	ATOM	237	N	ASP A	33	-11.555	19.733	-6.717	1.00	28.54	N
	ATOM	238	CA	ASP A	33	-12.087	20.173	-5.436	1.00	21.21	C
	ATOM	239	C	ASP A	33	-11.644	21.598	-5.118	1.00	28.79	C
	ATOM	240	O	ASP A	33	-10.639	21.863	-4.449	1.00	27.97	O
	ATOM	241	CB	ASP A	33	-11.705	19.175	-4.360	1.00	21.50	C
20	ATOM	242	CG	ASP A	33	-12.294	19.460	-3.007	1.00	20.79	C
	ATOM	243	OD1	ASP A	33	-13.016	20.472	-2.838	1.00	23.24	O
	ATOM	244	OD2	ASP A	33	-12.052	18.642	-2.085	1.00	23.15	O
	ATOM	245	N	GLN A	34	-12.472	22.543	-5.591	1.00	25.22	N
	ATOM	246	CA	GLN A	34	-12.204	23.959	-5.402	1.00	22.75	C
25	ATOM	247	C	GLN A	34	-12.474	24.393	-3.962	1.00	22.82	C
	ATOM	248	O	GLN A	34	-11.800	25.313	-3.483	1.00	26.92	O
	ATOM	249	CB	GLN A	34	-13.126	24.830	-6.265	1.00	31.62	C
	ATOM	250	CG	GLN A	34	-12.464	25.374	-7.505	1.00	39.47	C
	ATOM	251	CD	GLN A	34	-11.961	24.251	-8.392	1.00	45.04	C
30	ATOM	252	OE1	GLN A	34	-10.834	24.245	-8.874	1.00	50.64	O
	ATOM	253	NE2	GLN A	34	-12.826	23.258	-8.600	1.00	52.85	N
	ATOM	254	N	THR A	35	-13.484	23.784	-3.368	1.00	20.80	N
	ATOM	255	CA	THR A	35	-13.900	24.112	-2.012	1.00	21.60	C
	ATOM	256	C	THR A	35	-12.757	23.884	-1.026	1.00	18.34	C
35	ATOM	257	O	THR A	35	-12.439	24.766	-0.221	1.00	20.03	O
	ATOM	258	CB	THR A	35	-15.137	23.325	-1.574	1.00	27.01	C
	ATOM	259	OG1	THR A	35	-16.266	23.811	-2.338	1.00	28.82	O
	ATOM	260	CG2	THR A	35	-15.442	23.548	-0.100	1.00	27.13	C
	ATOM	261	N	ASN A	36	-12.139	22.715	-1.098	1.00	20.66	N
40	ATOM	262	CA	ASN A	36	-10.988	22.500	-0.189	1.00	15.84	C
	ATOM	263	C	ASN A	36	-9.741	23.202	-0.662	1.00	21.68	C
	ATOM	264	O	ASN A	36	-8.901	23.559	0.199	1.00	20.93	O
	ATOM	265	CB	ASN A	36	-10.797	21.004	0.050	1.00	20.04	C
	ATOM	266	CG	ASN A	36	-11.785	20.400	0.999	1.00	21.52	C
45	ATOM	267	OD1	ASN A	36	-11.967	20.808	2.153	1.00	20.71	O
	ATOM	268	ND2	ASN A	36	-12.466	19.303	0.606	1.00	21.89	N
	ATOM	269	N	ALA A	37	-9.535	23.468	-1.947	1.00	19.31	N
	ATOM	270	CA	ALA A	37	-8.366	24.216	-2.399	1.00	16.22	C
	ATOM	271	C	ALA A	37	-8.414	25.628	-1.806	1.00	22.25	C
50	ATOM	272	O	ALA A	37	-7.410	26.175	-1.365	1.00	20.26	O
	ATOM	273	CB	ALA A	37	-8.347	24.311	-3.926	1.00	22.22	C
	ATOM	274	N	ALA A	38	-9.617	26.185	-1.751	1.00	19.54	N
	ATOM	275	CA	ALA A	38	-9.855	27.521	-1.216	1.00	16.76	C
	ATOM	276	C	ALA A	38	-9.602	27.541	0.295	1.00	21.41	C
55	ATOM	277	O	ALA A	38	-9.085	28.533	0.810	1.00	20.71	O
	ATOM	278	CB	ALA A	38	-11.300	27.921	-1.500	1.00	18.76	C
	ATOM	279	N	LYS A	39	-9.984	26.451	0.954	1.00	18.20	N
	ATOM	280	CA	LYS A	39	-9.697	26.347	2.402	1.00	16.71	C
	ATOM	281	C	LYS A	39	-8.176	26.312	2.607	1.00	18.03	C

	ATOM	282	O	LYS	A	39	-7.736	26.952	3.590	1.00 16.49	O
	ATOM	283	CB	LYS	A	39	-10.373	25.055	2.871	1.00 15.79	C
	ATOM	284	CG	LYS	A	39	-11.841	25.247	3.160	1.00 15.84	C
	ATOM	285	CD	LYS	A	39	-12.685	23.997	3.177	1.00 24.79	C
5	ATOM	286	CE	LYS	A	39	-12.603	23.222	4.473	1.00 23.47	C
	ATOM	287	NZ	LYS	A	39	-13.371	21.928	4.356	1.00 25.57	N
	ATOM	288	N	VAL	A	40	-7.425	25.584	1.796	1.00 18.40	N
	ATOM	289	CA	VAL	A	40	-5.964	25.612	1.920	1.00 16.71	C
	ATOM	290	C	VAL	A	40	-5.436	27.032	1.739	1.00 18.50	C
10	ATOM	291	O	VAL	A	40	-4.613	27.534	2.522	1.00 17.77	O
	ATOM	292	CB	VAL	A	40	-5.271	24.618	0.962	1.00 13.77	C
	ATOM	293	CG1	VAL	A	40	-3.753	24.733	1.145	1.00 18.12	C
	ATOM	294	CG2	VAL	A	40	-5.711	23.177	1.245	1.00 17.94	C
	ATOM	295	N	LYS	A	41	-5.896	27.745	0.679	1.00 18.92	N
15	ATOM	296	CA	LYS	A	41	-5.418	29.127	0.476	1.00 22.78	C
	ATOM	297	C	LYS	A	41	-5.760	30.039	1.647	1.00 21.74	C
	ATOM	298	O	LYS	A	41	-4.993	30.940	1.994	1.00 18.77	O
	ATOM	299	CB	LYS	A	41	-5.956	29.684	-0.855	1.00 23.98	C
	ATOM	300	CG	LYS	A	41	-5.119	30.858	-1.369	1.00 21.98	C
20	ATOM	301	CD	LYS	A	41	-5.158	30.897	-2.897	1.00 32.46	C
	ATOM	302	CE	LYS	A	41	-5.617	32.247	-3.405	1.00 40.42	C
	ATOM	303	NZ	LYS	A	41	-4.582	33.307	-3.303	1.00 45.05	N
	ATOM	304	N	TYR	A	42	-6.859	29.813	2.333	1.00 17.12	N
	ATOM	305	CA	TYR	A	42	-7.288	30.552	3.516	1.00 17.44	C
25	ATOM	306	C	TYR	A	42	-6.200	30.342	4.583	1.00 17.60	C
	ATOM	307	O	TYR	A	42	-5.664	31.327	5.062	1.00 18.30	O
	ATOM	308	CB	TYR	A	42	-8.641	30.140	4.083	1.00 18.45	C
	ATOM	309	CG	TYR	A	42	-9.121	30.848	5.331	1.00 19.03	C
	ATOM	310	CD1	TYR	A	42	-8.662	30.530	6.587	1.00 17.73	C
30	ATOM	311	CD2	TYR	A	42	-10.071	31.867	5.243	1.00 21.04	C
	ATOM	312	CE1	TYR	A	42	-9.098	31.175	7.732	1.00 18.75	C
	ATOM	313	CE2	TYR	A	42	-10.531	32.515	6.385	1.00 28.47	C
	ATOM	314	CZ	TYR	A	42	-10.044	32.170	7.623	1.00 28.03	C
	ATOM	315	OH	TYR	A	42	-10.504	32.830	8.743	1.00 25.85	O
35	ATOM	316	N	VAL	A	43	-5.877	29.067	4.811	1.00 16.45	N
	ATOM	317	CA	VAL	A	43	-4.792	28.828	5.785	1.00 13.47	C
	ATOM	318	C	VAL	A	43	-3.503	29.471	5.327	1.00 18.93	C
	ATOM	319	O	VAL	A	43	-2.730	30.002	6.145	1.00 17.25	O
	ATOM	320	CB	VAL	A	43	-4.610	27.311	6.026	1.00 17.47	C
40	ATOM	321	CG1	VAL	A	43	-3.458	27.002	6.989	1.00 15.90	C
	ATOM	322	CG2	VAL	A	43	-5.918	26.733	6.532	1.00 14.49	C
	ATOM	323	N	GLN	A	44	-3.153	29.403	4.028	1.00 14.80	N
	ATOM	324	CA	GLN	A	44	-1.897	29.944	3.546	1.00 16.17	C
	ATOM	325	C	GLN	A	44	-1.682	31.442	3.770	1.00 15.63	C
45	ATOM	326	O	GLN	A	44	-0.556	31.878	4.029	1.00 16.96	O
	ATOM	327	CB	GLN	A	44	-1.734	29.716	2.015	1.00 16.42	C
	ATOM	328	CG	GLN	A	44	-1.411	28.265	1.679	1.00 19.44	C
	ATOM	329	CD	GLN	A	44	-1.289	28.090	0.171	1.00 23.66	C
	ATOM	330	OE1	GLN	A	44	-2.276	28.257	-0.536	1.00 20.63	O
50	ATOM	331	NE2	GLN	A	44	-0.100	27.763	-0.334	1.00 21.61	N
	ATOM	332	N	GLU	A	45	-2.761	32.201	3.656	1.00 17.72	N
	ATOM	333	CA	GLU	A	45	-2.657	33.649	3.741	1.00 20.01	C
	ATOM	334	C	GLU	A	45	-3.167	34.238	5.026	1.00 18.93	C
	ATOM	335	O	GLU	A	45	-2.740	35.356	5.356	1.00 23.99	O
55	ATOM	336	CB	GLU	A	45	-3.494	34.245	2.606	1.00 18.32	C
	ATOM	337	CG	GLU	A	45	-3.188	33.674	1.244	1.00 23.77	C
	ATOM	338	CD	GLU	A	45	-3.500	34.633	0.120	1.00 33.30	C
	ATOM	339	OE1	GLU	A	45	-4.472	35.405	0.247	1.00 45.19	O
	ATOM	340	OE2	GLU	A	45	-2.787	34.615	-0.904	1.00 35.39	O

	ATOM	341	N	LYS	A	46	-4.104	33.593	5.696	1.00	18.31	N
	ATOM	342	CA	LYS	A	46	-4.722	34.224	6.846	1.00	18.40	C
	ATOM	343	C	LYS	A	46	-4.564	33.547	8.178	1.00	23.82	C
	ATOM	344	O	LYS	A	46	-5.174	34.044	9.143	1.00	24.60	O
5	ATOM	345	CB	LYS	A	46	-6.240	34.381	6.571	1.00	18.01	C
	ATOM	346	CG	LYS	A	46	-6.516	35.375	5.452	1.00	23.69	C
	ATOM	347	CD	LYS	A	46	-7.584	34.839	4.507	1.00	30.76	C
	ATOM	348	CE	LYS	A	46	-7.954	35.887	3.473	1.00	45.46	C
	ATOM	349	NZ	LYS	A	46	-6.969	36.044	2.357	1.00	43.16	N
10	ATOM	350	N	VAL	A	47	-3.852	32.412	8.262	1.00	17.29	N
	ATOM	351	CA	VAL	A	47	-3.835	31.749	9.578	1.00	15.28	C
	ATOM	352	C	VAL	A	47	-2.404	31.717	10.121	1.00	13.52	C
	ATOM	353	O	VAL	A	47	-1.586	31.140	9.413	1.00	16.31	O
	ATOM	354	CB	VAL	A	47	-4.379	30.325	9.435	1.00	14.62	C
15	ATOM	355	CG1	VAL	A	47	-4.238	29.497	10.692	1.00	13.84	C
	ATOM	356	CG2	VAL	A	47	-5.895	30.343	9.099	1.00	17.49	C
	ATOM	357	N	GLY	A	48	-2.167	32.430	11.230	1.00	15.51	N
	ATOM	358	CA	GLY	A	48	-0.768	32.459	11.709	1.00	16.24	C
	ATOM	359	C	GLY	A	48	-0.370	31.116	12.317	1.00	15.45	C
20	ATOM	360	O	GLY	A	48	-1.210	30.436	12.875	1.00	15.17	O
	ATOM	361	N	THR	A	49	0.919	30.785	12.177	1.00	16.03	N
	ATOM	362	CA	THR	A	49	1.435	29.557	12.783	1.00	16.13	C
	ATOM	363	C	THR	A	49	2.805	29.901	13.377	1.00	17.15	C
	ATOM	364	O	THR	A	49	3.492	30.741	12.790	1.00	15.90	O
25	ATOM	365	CB	THR	A	49	1.526	28.452	11.739	1.00	16.91	C
	ATOM	366	OG1	THR	A	49	0.181	28.169	11.289	1.00	14.21	O
	ATOM	367	CG2	THR	A	49	1.936	27.132	12.400	1.00	16.21	C
	ATOM	368	N	PHE	A	50	3.164	29.322	14.530	1.00	16.48	N
	ATOM	369	CA	PHE	A	50	4.518	29.587	15.003	1.00	13.84	C
30	ATOM	370	C	PHE	A	50	5.592	28.969	14.111	1.00	14.81	C
	ATOM	371	O	PHE	A	50	5.376	28.019	13.352	1.00	15.09	O
	ATOM	372	CB	PHE	A	50	4.656	28.868	16.371	1.00	13.55	C
	ATOM	373	CG	PHE	A	50	4.098	29.651	17.514	1.00	13.29	C
	ATOM	374	CD1	PHE	A	50	2.810	30.140	17.494	1.00	16.48	C
35	ATOM	375	CD2	PHE	A	50	4.892	29.919	18.620	1.00	15.87	C
	ATOM	376	CE1	PHE	A	50	2.321	30.870	18.548	1.00	15.15	C
	ATOM	377	CE2	PHE	A	50	4.421	30.680	19.684	1.00	16.11	C
	ATOM	378	CZ	PHE	A	50	3.105	31.159	19.662	1.00	15.82	C
	ATOM	379	N	TYR	A	51	6.778	29.576	14.225	1.00	11.65	N
40	ATOM	380	CA	TYR	A	51	8.011	29.069	13.590	1.00	12.70	C
	ATOM	381	C	TYR	A	51	8.790	28.246	14.609	1.00	11.84	C
	ATOM	382	O	TYR	A	51	9.086	28.745	15.718	1.00	15.79	O
	ATOM	383	CB	TYR	A	51	8.865	30.294	13.217	1.00	13.11	C
	ATOM	384	CG	TYR	A	51	8.379	31.139	12.051	1.00	13.50	C
45	ATOM	385	CD1	TYR	A	51	7.326	32.026	12.276	1.00	13.00	C
	ATOM	386	CD2	TYR	A	51	8.951	31.115	10.801	1.00	15.21	C
	ATOM	387	CE1	TYR	A	51	6.833	32.845	11.286	1.00	15.73	C
	ATOM	388	CE2	TYR	A	51	8.473	31.940	9.786	1.00	16.71	C
	ATOM	389	CZ	TYR	A	51	7.410	32.788	10.036	1.00	19.01	C
50	ATOM	390	OH	TYR	A	51	6.947	33.585	9.011	1.00	16.58	O
	ATOM	391	N	TRP	A	52	9.153	27.012	14.272	1.00	13.83	N
	ATOM	392	CA	TRP	A	52	9.890	26.152	15.154	1.00	12.86	C
	ATOM	393	C	TRP	A	52	11.404	26.265	14.965	1.00	13.06	C
	ATOM	394	O	TRP	A	52	11.934	25.983	13.899	1.00	15.63	O
55	ATOM	395	CB	TRP	A	52	9.489	24.692	14.949	1.00	13.88	C
	ATOM	396	CG	TRP	A	52	8.104	24.398	15.475	1.00	11.93	C
	ATOM	397	CD1	TRP	A	52	6.914	24.897	15.023	1.00	14.24	C
	ATOM	398	CD2	TRP	A	52	7.786	23.552	16.602	1.00	12.10	C
	ATOM	399	NE1	TRP	A	52	5.866	24.374	15.731	1.00	10.67	N

	ATOM	400	CE2	TRP	A	52	6.392	23.553	16.715	1.00	12.07	C
	ATOM	401	CE3	TRP	A	52	8.562	22.791	17.485	1.00	12.55	C
	ATOM	402	CZ2	TRP	A	52	5.737	22.798	17.706	1.00	12.99	C
	ATOM	403	CZ3	TRP	A	52	7.912	22.053	18.466	1.00	13.86	C
5	ATOM	404	CH2	TRP	A	52	6.502	22.056	18.557	1.00	13.59	C
	ATOM	405	N	ILE	A	53	12.019	26.684	16.082	1.00	11.99	N
	ATOM	406	CA	ILE	A	53	13.490	26.888	16.037	1.00	13.95	C
	ATOM	407	C	ILE	A	53	14.119	25.692	16.735	1.00	15.56	C
	ATOM	408	O	ILE	A	53	14.563	25.776	17.907	1.00	13.88	O
10	ATOM	409	CB	ILE	A	53	13.887	28.213	16.688	1.00	11.83	C
	ATOM	410	CG1	ILE	A	53	13.108	29.433	16.197	1.00	13.23	C
	ATOM	411	CG2	ILE	A	53	15.388	28.449	16.348	1.00	15.04	C
	ATOM	412	CD1	ILE	A	53	12.866	29.590	14.723	1.00	14.75	C
	ATOM	413	N	SER	A	54	13.986	24.549	16.079	1.00	15.20	N
15	ATOM	414	CA	SER	A	54	14.235	23.237	16.686	1.00	10.25	C
	ATOM	415	C	SER	A	54	15.685	22.814	16.750	1.00	14.35	C
	ATOM	416	O	SER	A	54	15.968	21.697	17.179	1.00	15.04	O
	ATOM	417	CB	SER	A	54	13.378	22.178	15.982	1.00	13.89	C
	ATOM	418	OG	SER	A	54	11.993	22.583	15.969	1.00	17.22	O
20	ATOM	419	N	ASN	A	55	16.595	23.631	16.271	1.00	15.12	N
	ATOM	420	CA	ASN	A	55	18.028	23.347	16.337	1.00	14.74	C
	ATOM	421	C	ASN	A	55	18.794	24.601	15.916	1.00	15.53	C
	ATOM	422	O	ASN	A	55	18.212	25.630	15.547	1.00	15.28	O
	ATOM	423	CB	ASN	A	55	18.434	22.138	15.511	1.00	14.25	C
25	ATOM	424	CG	ASN	A	55	17.949	22.297	14.094	1.00	15.84	C
	ATOM	425	OD1	ASN	A	55	18.306	23.220	13.368	1.00	15.76	O
	ATOM	426	ND2	ASN	A	55	17.034	21.393	13.725	1.00	20.84	N
	ATOM	427	N	ILE	A	56	20.115	24.557	16.063	1.00	13.68	N
	ATOM	428	CA	ILE	A	56	20.993	25.713	15.847	1.00	16.07	C
30	ATOM	429	C	ILE	A	56	20.940	26.138	14.395	1.00	15.12	C
	ATOM	430	O	ILE	A	56	20.891	27.354	14.124	1.00	14.39	O
	ATOM	431	CB	ILE	A	56	22.429	25.397	16.309	1.00	14.99	C
	ATOM	432	CG1	ILE	A	56	22.495	25.468	17.849	1.00	15.05	C
	ATOM	433	CG2	ILE	A	56	23.449	26.373	15.726	1.00	15.64	C
35	ATOM	434	CD1	ILE	A	56	23.657	24.585	18.367	1.00	15.09	C
	ATOM	435	N	PHE	A	57	20.901	25.200	13.464	1.00	15.86	N
	ATOM	436	CA	PHE	A	57	20.747	25.523	12.048	1.00	11.80	C
	ATOM	437	C	PHE	A	57	19.503	26.421	11.832	1.00	15.24	C
	ATOM	438	O	PHE	A	57	19.550	27.342	11.017	1.00	14.57	O
40	ATOM	439	CB	PHE	A	57	20.610	24.230	11.256	1.00	15.25	C
	ATOM	440	CG	PHE	A	57	20.373	24.376	9.783	1.00	14.23	C
	ATOM	441	CD1	PHE	A	57	21.438	24.566	8.932	1.00	15.89	C
	ATOM	442	CD2	PHE	A	57	19.093	24.374	9.256	1.00	15.74	C
	ATOM	443	CE1	PHE	A	57	21.242	24.700	7.568	1.00	16.76	C
45	ATOM	444	CE2	PHE	A	57	18.873	24.474	7.900	1.00	21.90	C
	ATOM	445	CZ	PHE	A	57	19.959	24.679	7.063	1.00	19.88	C
	ATOM	446	N	LEU	A	58	18.390	26.082	12.443	1.00	13.64	N
	ATOM	447	CA	LEU	A	58	17.153	26.810	12.307	1.00	13.38	C
	ATOM	448	C	LEU	A	58	17.143	28.147	13.024	1.00	13.46	C
50	ATOM	449	O	LEU	A	58	16.116	28.830	12.829	1.00	14.86	O
	ATOM	450	CB	LEU	A	58	15.905	25.998	12.647	1.00	18.35	C
	ATOM	451	CG	LEU	A	58	15.736	24.741	11.797	1.00	16.27	C
	ATOM	452	CD1	LEU	A	58	14.647	23.822	12.365	1.00	14.80	C
	ATOM	453	CD2	LEU	A	58	15.377	25.128	10.359	1.00	19.12	C
55	ATOM	454	N	LEU	A	59	18.172	28.584	13.736	1.00	13.01	N
	ATOM	455	CA	LEU	A	59	18.157	29.994	14.198	1.00	11.72	C
	ATOM	456	C	LEU	A	59	17.950	30.951	13.038	1.00	14.70	C
	ATOM	457	O	LEU	A	59	17.368	32.026	13.261	1.00	16.53	O
	ATOM	458	CB	LEU	A	59	19.516	30.336	14.855	1.00	14.46	C

	ATOM	459	CG	LEU	A	59	19.716	29.678	16.239	1.00 18.29	C
	ATOM	460	CD1	LEU	A	59	21.206	29.708	16.577	1.00 18.73	C
	ATOM	461	CD2	LEU	A	59	18.916	30.460	17.273	1.00 17.83	C
	ATOM	462	N	ARG	A	60	18.333	30.604	11.813	1.00 15.56	N
5	ATOM	463	CA	ARG	A	60	18.133	31.405	10.610	1.00 16.80	C
	ATOM	464	C	ARG	A	60	16.664	31.649	10.348	1.00 15.95	C
	ATOM	465	O	ARG	A	60	16.319	32.692	9.806	1.00 17.25	O
	ATOM	466	CB	ARG	A	60	18.783	30.774	9.370	1.00 20.89	C
	ATOM	467	CG	ARG	A	60	18.104	29.517	8.845	1.00 24.06	C
10	ATOM	468	CD	ARG	A	60	18.985	28.721	7.869	1.00 31.87	C
	ATOM	469	NE	ARG	A	60	20.262	28.394	8.447	1.00 33.83	N
	ATOM	470	CZ	ARG	A	60	21.518	28.222	8.089	1.00 35.90	C
	ATOM	471	NH1	ARG	A	60	21.967	28.348	6.842	1.00 29.08	N
	ATOM	472	NH2	ARG	A	60	22.384	27.921	9.063	1.00 33.10	N
15	ATOM	473	N	ASP	A	61	15.755	30.730	10.778	1.00 19.09	N
	ATOM	474	CA	ASP	A	61	14.329	30.969	10.622	1.00 15.63	C
	ATOM	475	C	ASP	A	61	13.852	32.144	11.476	1.00 15.44	C
	ATOM	476	O	ASP	A	61	12.804	32.711	11.159	1.00 18.75	O
	ATOM	477	CB	ASP	A	61	13.487	29.720	10.897	1.00 14.39	C
20	ATOM	478	CG	ASP	A	61	13.363	28.861	9.648	1.00 18.12	C
	ATOM	479	OD1	ASP	A	61	13.802	29.295	8.564	1.00 23.64	O
	ATOM	480	OD2	ASP	A	61	12.828	27.718	9.718	1.00 18.24	O
	ATOM	481	N	ILE	A	62	14.596	32.541	12.545	1.00 13.50	N
	ATOM	482	CA	ILE	A	62	14.158	33.734	13.271	1.00 16.23	C
25	ATOM	483	C	ILE	A	62	14.319	34.970	12.382	1.00 20.75	C
	ATOM	484	O	ILE	A	62	13.452	35.865	12.334	1.00 16.45	O
	ATOM	485	CB	ILE	A	62	14.966	33.902	14.572	1.00 18.28	C
	ATOM	486	CG1	ILE	A	62	14.729	32.710	15.498	1.00 18.12	C
	ATOM	487	CG2	ILE	A	62	14.544	35.150	15.339	1.00 16.41	C
30	ATOM	488	CD1	ILE	A	62	15.606	32.777	16.745	1.00 19.28	C
	ATOM	489	N	ASP	A	63	15.422	35.030	11.631	1.00 17.23	N
	ATOM	490	CA	ASP	A	63	15.624	36.137	10.689	1.00 19.20	C
	ATOM	491	C	ASP	A	63	14.500	36.146	9.653	1.00 19.34	C
	ATOM	492	O	ASP	A	63	13.958	37.217	9.321	1.00 22.74	O
35	ATOM	493	CB	ASP	A	63	17.019	36.085	10.059	1.00 21.12	C
	ATOM	494	CG	ASP	A	63	18.111	36.118	11.113	1.00 21.39	C
	ATOM	495	OD1	ASP	A	63	18.085	36.935	12.055	1.00 25.66	O
	ATOM	496	OD2	ASP	A	63	19.068	35.309	11.065	1.00 30.68	O
	ATOM	497	N	VAL	A	64	14.140	34.951	9.165	1.00 17.14	N
40	ATOM	498	CA	VAL	A	64	13.036	34.834	8.226	1.00 15.53	C
	ATOM	499	C	VAL	A	64	11.744	35.398	8.835	1.00 14.91	C
	ATOM	500	O	VAL	A	64	11.044	36.197	8.188	1.00 16.37	O
	ATOM	501	CB	VAL	A	64	12.781	33.392	7.750	1.00 17.08	C
	ATOM	502	CG1	VAL	A	64	11.594	33.375	6.782	1.00 18.67	C
45	ATOM	503	CG2	VAL	A	64	14.023	32.836	7.077	1.00 20.31	C
	ATOM	504	N	ALA	A	65	11.417	34.975	10.063	1.00 15.69	N
	ATOM	505	CA	ALA	A	65	10.189	35.446	10.713	1.00 15.10	C
	ATOM	506	C	ALA	A	65	10.193	36.967	10.892	1.00 17.42	C
	ATOM	507	O	ALA	A	65	9.203	37.683	10.672	1.00 15.84	O
50	ATOM	508	CB	ALA	A	65	9.954	34.724	12.052	1.00 17.84	C
	ATOM	509	N	ILE	A	66	11.336	37.499	11.317	1.00 14.55	N
	ATOM	510	CA	ILE	A	66	11.454	38.954	11.529	1.00 23.15	C
	ATOM	511	C	ILE	A	66	11.294	39.695	10.214	1.00 18.04	N
	ATOM	512	O	ILE	A	66	10.668	40.758	10.198	1.00 20.04	O
55	ATOM	513	CB	ILE	A	66	12.812	39.258	12.179	1.00 19.03	C
	ATOM	514	CG1	ILE	A	66	12.785	38.863	13.645	1.00 19.68	C
	ATOM	515	CG2	ILE	A	66	13.210	40.743	12.075	1.00 18.72	C
	ATOM	516	CD1	ILE	A	66	14.150	38.787	14.282	1.00 18.42	C
	ATOM	517	N	GLN	A	67	11.856	39.221	9.122	1.00 18.61	N

	ATOM	518	CA	GLN	A	67	11.702	39.831	7.802	1.00	16.62	C
	ATOM	519	C	GLN	A	67	10.233	39.906	7.451	1.00	21.78	C
	ATOM	520	O	GLN	A	67	9.628	40.914	7.073	1.00	19.15	O
	ATOM	521	CB	GLN	A	67	12.487	39.068	6.726	1.00	21.47	C
5	ATOM	522	CG	GLN	A	67	12.027	39.497	5.328	1.00	35.22	C
	ATOM	523	CD	GLN	A	67	12.918	38.994	4.211	1.00	37.11	C
	ATOM	524	OE1	GLN	A	67	14.114	38.779	4.391	1.00	33.68	O
	ATOM	525	NE2	GLN	A	67	12.348	38.809	3.028	1.00	41.81	N
	ATOM	526	N	ASN	A	68	9.551	38.748	7.606	1.00	18.06	N
10	ATOM	527	CA	ASN	A	68	8.127	38.671	7.361	1.00	18.35	C
	ATOM	528	C	ASN	A	68	7.322	39.597	8.261	1.00	19.58	C
	ATOM	529	O	ASN	A	68	6.359	40.200	7.802	1.00	23.36	O
	ATOM	530	CB	ASN	A	68	7.647	37.217	7.516	1.00	14.91	C
	ATOM	531	CG	ASN	A	68	8.226	36.286	6.479	1.00	22.58	C
15	ATOM	532	OD1	ASN	A	68	8.639	36.711	5.397	1.00	24.04	O
	ATOM	533	ND2	ASN	A	68	8.200	34.978	6.758	1.00	18.67	N
	ATOM	534	N	ALA	A	69	7.682	39.721	9.539	1.00	19.23	N
	ATOM	535	CA	ALA	A	69	6.991	40.578	10.476	1.00	15.96	C
	ATOM	536	C	ALA	A	69	7.135	42.046	10.004	1.00	22.11	C
20	ATOM	537	O	ALA	A	69	6.139	42.743	9.941	1.00	21.63	O
	ATOM	538	CB	ALA	A	69	7.453	40.465	11.917	1.00	18.59	C
	ATOM	539	N	ARG	A	70	8.343	42.432	9.609	1.00	22.18	N
	ATOM	540	CA	ARG	A	70	8.567	43.803	9.148	1.00	22.08	C
	ATOM	541	C	ARG	A	70	7.864	44.100	7.832	1.00	27.11	C
25	ATOM	542	O	ARG	A	70	7.398	45.233	7.637	1.00	30.23	O
	ATOM	543	CB	ARG	A	70	10.067	44.076	9.026	1.00	19.06	C
	ATOM	544	CG	ARG	A	70	10.775	44.009	10.370	1.00	22.53	C
	ATOM	545	CD	ARG	A	70	12.270	44.320	10.277	1.00	23.54	C
	ATOM	546	NE	ARG	A	70	12.742	44.598	11.647	1.00	21.57	N
30	ATOM	547	CZ	ARG	A	70	13.950	44.268	12.072	1.00	16.33	C
	ATOM	548	NH1	ARG	A	70	14.809	43.724	11.227	1.00	23.70	N
	ATOM	549	NH2	ARG	A	70	14.256	44.540	13.351	1.00	20.71	N
	ATOM	550	N	ALA	A	71	7.694	43.123	6.946	1.00	24.69	N
	ATOM	551	CA	ALA	A	71	6.964	43.311	5.701	1.00	27.59	C
35	ATOM	552	C	ALA	A	71	5.463	43.444	5.954	1.00	33.23	C
	ATOM	553	O	ALA	A	71	4.738	44.190	5.279	1.00	34.34	O
	ATOM	554	CB	ALA	A	71	7.209	42.148	4.740	1.00	32.45	C
	ATOM	555	N	ALA	A	72	4.962	42.719	6.947	1.00	25.47	N
	ATOM	556	CA	ALA	A	72	3.554	42.744	7.303	1.00	25.49	C
40	ATOM	557	C	ALA	A	72	3.206	44.121	7.858	1.00	30.33	C
	ATOM	558	O	ALA	A	72	2.244	44.778	7.498	1.00	28.16	O
	ATOM	559	CB	ALA	A	72	3.216	41.648	8.308	1.00	21.10	C
	ATOM	560	N	LYS	A	73	4.103	44.596	8.714	1.00	30.08	N
	ATOM	561	CA	LYS	A	73	3.891	45.888	9.381	1.00	34.22	C
45	ATOM	562	C	LYS	A	73	4.012	47.017	8.373	1.00	32.67	C
	ATOM	563	O	LYS	A	73	3.334	48.039	8.511	1.00	28.18	O
	ATOM	564	CB	LYS	A	73	4.812	45.861	10.576	1.00	41.50	C
	ATOM	565	CG	LYS	A	73	5.848	46.941	10.667	1.00	48.31	C
	ATOM	566	CD	LYS	A	73	5.362	48.086	11.538	1.00	50.90	C
50	ATOM	567	CE	LYS	A	73	5.118	47.686	12.983	1.00	59.96	C
	ATOM	568	NZ	LYS	A	73	6.022	46.596	13.449	1.00	60.78	N
	ATOM	569	N	ALA	A	74	4.766	46.799	7.290	1.00	30.13	N
	ATOM	570	CA	ALA	A	74	4.858	47.776	6.212	1.00	35.21	C
	ATOM	571	C	ALA	A	74	3.594	47.834	5.365	1.00	42.35	C
55	ATOM	572	O	ALA	A	74	3.390	48.892	4.743	1.00	45.03	O
	ATOM	573	CB	ALA	A	74	6.059	47.523	5.311	1.00	29.40	C
	ATOM	574	N	ARG	A	75	2.718	46.830	5.332	1.00	40.77	N
	ATOM	575	CA	ARG	A	75	1.478	46.989	4.565	1.00	36.94	C
	ATOM	576	C	ARG	A	75	0.316	47.321	5.496	1.00	36.22	C

	ATOM	577	O	ARG	A	75	-0.855	47.166	5.152	1.00	37.82	O
	ATOM	578	CB	ARG	A	75	1.151	45.795	3.681	1.00	43.25	C
	ATOM	579	CG	ARG	A	75	1.341	44.478	4.378	1.00	44.99	C
	ATOM	580	CD	ARG	A	75	1.163	43.280	3.447	1.00	49.43	C
5	ATOM	581	NE	ARG	A	75	0.818	42.142	4.312	1.00	43.11	N
	ATOM	582	CZ	ARG	A	75	1.679	41.201	4.679	1.00	44.77	C
	ATOM	583	NH1	ARG	A	75	2.931	41.211	4.256	1.00	39.44	N
	ATOM	584	NH2	ARG	A	75	1.266	40.222	5.473	1.00	46.52	N
	ATOM	585	N	GLY	A	76	0.648	47.799	6.695	1.00	33.79	N
10	ATOM	586	CA	GLY	A	76	-0.308	48.248	7.663	1.00	34.23	C
	ATOM	587	C	GLY	A	76	-0.776	47.269	8.710	1.00	38.37	C
	ATOM	588	O	GLY	A	76	-1.611	47.609	9.558	1.00	35.19	O
	ATOM	589	N	GLU	A	77	-0.234	46.057	8.695	1.00	32.72	N
	ATOM	590	CA	GLU	A	77	-0.648	45.064	9.690	1.00	27.88	C
15	ATOM	591	C	GLU	A	77	0.040	45.289	11.024	1.00	25.54	C
	ATOM	592	O	GLU	A	77	0.981	46.072	11.184	1.00	23.07	O
	ATOM	593	CB	GLU	A	77	-0.336	43.672	9.139	1.00	29.69	C
	ATOM	594	CG	GLU	A	77	-0.915	43.442	7.742	1.00	29.74	C
	ATOM	595	CD	GLU	A	77	-0.701	42.023	7.258	1.00	34.45	C
20	ATOM	596	OE1	GLU	A	77	-0.172	41.186	8.014	1.00	35.54	O
	ATOM	597	OE2	GLU	A	77	-1.068	41.769	6.096	1.00	37.17	O
	ATOM	598	N	ASN	A	78	-0.416	44.560	12.030	1.00	25.11	N
	ATOM	599	CA	ASN	A	78	0.075	44.595	13.395	1.00	29.31	C
	ATOM	600	C	ASN	A	78	0.282	43.157	13.914	1.00	21.55	C
25	ATOM	601	O	ASN	A	78	-0.569	42.589	14.611	1.00	20.53	O
	ATOM	602	CB	ASN	A	78	-0.954	45.253	14.320	1.00	32.70	C
	ATOM	603	CG	ASN	A	78	-0.321	46.480	14.944	1.00	48.63	C
	ATOM	604	OD1	ASN	A	78	-0.413	47.540	14.329	1.00	43.28	O
	ATOM	605	ND2	ASN	A	78	0.326	46.303	16.087	1.00	47.85	N
30	ATOM	606	N	PRO	A	79	1.411	42.633	13.518	1.00	26.64	N
	ATOM	607	CA	PRO	A	79	1.735	41.238	13.758	1.00	22.72	C
	ATOM	608	C	PRO	A	79	2.301	40.962	15.126	1.00	21.56	C
	ATOM	609	O	PRO	A	79	2.821	41.834	15.829	1.00	20.72	O
	ATOM	610	CB	PRO	A	79	2.779	40.863	12.672	1.00	19.05	C
35	ATOM	611	CG	PRO	A	79	3.404	42.190	12.343	1.00	27.23	C
	ATOM	612	CD	PRO	A	79	2.420	43.275	12.683	1.00	25.70	C
	ATOM	613	N	ILE	A	80	2.171	39.680	15.477	1.00	15.61	N
	ATOM	614	CA	ILE	A	80	2.938	39.180	16.628	1.00	19.10	C
	ATOM	615	C	ILE	A	80	3.537	37.877	16.092	1.00	19.54	C
40	ATOM	616	O	ILE	A	80	2.820	37.100	15.472	1.00	16.60	O
	ATOM	617	CB	ILE	A	80	2.178	39.061	17.925	1.00	15.55	C
	ATOM	618	CG1	ILE	A	80	3.108	38.513	19.022	1.00	17.32	C
	ATOM	619	CG2	ILE	A	80	0.910	38.217	17.736	1.00	16.24	C
	ATOM	620	CD1	ILE	A	80	2.543	38.603	20.427	1.00	17.37	C
45	ATOM	621	N	VAL	A	81	4.850	37.747	16.231	1.00	15.36	N
	ATOM	622	CA	VAL	A	81	5.518	36.539	15.724	1.00	15.23	C
	ATOM	623	C	VAL	A	81	5.580	35.411	16.750	1.00	18.65	C
	ATOM	624	O	VAL	A	81	6.040	35.685	17.849	1.00	14.58	O
	ATOM	625	CB	VAL	A	81	6.984	36.937	15.403	1.00	19.78	C
50	ATOM	626	CG1	VAL	A	81	7.811	35.721	14.984	1.00	16.80	C
	ATOM	627	CG2	VAL	A	81	6.991	38.009	14.325	1.00	18.73	C
	ATOM	628	N	GLY	A	82	5.128	34.206	16.412	1.00	13.32	N
	ATOM	629	CA	GLY	A	82	5.241	33.099	17.379	1.00	14.02	C
	ATOM	630	C	GLY	A	82	6.521	32.327	17.019	1.00	12.83	C
55	ATOM	631	O	GLY	A	82	6.688	31.929	15.865	1.00	11.47	O
	ATOM	632	N	LEU	A	83	7.336	32.090	18.064	1.00	11.68	N
	ATOM	633	CA	LEU	A	83	8.565	31.294	17.886	1.00	12.33	C
	ATOM	634	C	LEU	A	83	8.548	30.159	18.919	1.00	13.16	C
	ATOM	635	O	LEU	A	83	8.168	30.411	20.064	1.00	13.82	O

	ATOM	636	CB	LEU	A	83	9.847	32.102	18.122	1.00	11.71	C
	ATOM	637	CG	LEU	A	83	10.062	33.262	17.139	1.00	14.81	C
	ATOM	638	CD1	LEU	A	83	11.339	34.012	17.563	1.00	14.82	C
	ATOM	639	CD2	LEU	A	83	10.147	32.759	15.722	1.00	13.22	C
5	ATOM	640	N	VAL	A	84	9.038	28.983	18.533	1.00	11.69	N
	ATOM	641	CA	VAL	A	84	9.103	27.865	19.496	1.00	9.75	C
	ATOM	642	C	VAL	A	84	10.601	27.669	19.809	1.00	11.01	C
	ATOM	643	O	VAL	A	84	11.359	27.478	18.879	1.00	14.07	O
	ATOM	644	CB	VAL	A	84	8.547	26.553	18.921	1.00	12.58	C
10	ATOM	645	CG1	VAL	A	84	8.466	25.532	20.063	1.00	15.29	C
	ATOM	646	CG2	VAL	A	84	7.133	26.763	18.360	1.00	11.72	C
	ATOM	647	N	LEU	A	85	10.971	27.880	21.063	1.00	12.20	N
	ATOM	648	CA	LEU	A	85	12.380	27.722	21.480	1.00	11.40	C
	ATOM	649	C	LEU	A	85	12.426	26.283	21.969	1.00	12.29	C
15	ATOM	650	O	LEU	A	85	11.824	25.945	23.006	1.00	13.55	O
	ATOM	651	CB	LEU	A	85	12.649	28.760	22.580	1.00	13.55	C
	ATOM	652	CG	LEU	A	85	14.109	28.879	23.015	1.00	12.40	C
	ATOM	653	CD1	LEU	A	85	14.379	30.308	23.458	1.00	15.19	C
	ATOM	654	CD2	LEU	A	85	14.415	27.880	24.115	1.00	17.10	C
20	ATOM	655	N	TYR	A	86	13.095	25.437	21.178	1.00	13.64	N
	ATOM	656	CA	TYR	A	86	13.032	23.997	21.430	1.00	10.83	C
	ATOM	657	C	TYR	A	86	14.341	23.293	21.099	1.00	15.34	C
	ATOM	658	O	TYR	A	86	14.442	22.719	20.022	1.00	14.86	O
	ATOM	659	CB	TYR	A	86	11.871	23.417	20.596	1.00	12.42	C
25	ATOM	660	CG	TYR	A	86	11.571	21.960	20.640	1.00	12.60	C
	ATOM	661	CD1	TYR	A	86	11.395	21.258	21.829	1.00	9.94	C
	ATOM	662	CD2	TYR	A	86	11.444	21.206	19.462	1.00	13.74	C
	ATOM	663	CE1	TYR	A	86	11.067	19.904	21.879	1.00	12.13	C
	ATOM	664	CE2	TYR	A	86	11.148	19.865	19.480	1.00	16.78	C
30	ATOM	665	CZ	TYR	A	86	10.962	19.209	20.687	1.00	15.36	C
	ATOM	666	OH	TYR	A	86	10.661	17.861	20.674	1.00	14.76	O
	ATOM	667	N	ASN	A	87	15.301	23.394	22.011	1.00	15.39	N
	ATOM	668	CA	ASN	A	87	16.574	22.656	21.769	1.00	10.89	C
	ATOM	669	C	ASN	A	87	17.212	22.231	23.068	1.00	12.51	C
35	ATOM	670	O	ASN	A	87	18.464	22.143	23.192	1.00	14.17	O
	ATOM	671	CB	ASN	A	87	17.480	23.536	20.917	1.00	12.53	C
	ATOM	672	CG	ASN	A	87	18.561	22.708	20.211	1.00	15.12	C
	ATOM	673	OD1	ASN	A	87	18.454	21.490	20.075	1.00	13.51	O
	ATOM	674	ND2	ASN	A	87	19.600	23.388	19.764	1.00	14.63	N
40	ATOM	675	N	LEU	A	88	16.400	21.886	24.068	1.00	12.48	N
	ATOM	676	CA	LEU	A	88	16.959	21.489	25.367	1.00	13.76	C
	ATOM	677	C	LEU	A	88	17.902	20.318	25.277	1.00	13.37	C
	ATOM	678	O	LEU	A	88	17.751	19.344	24.520	1.00	14.66	O
	ATOM	679	CB	LEU	A	88	15.748	21.029	26.236	1.00	16.32	C
45	ATOM	680	CG	LEU	A	88	15.926	21.035	27.755	1.00	16.68	C
	ATOM	681	CD1	LEU	A	88	16.144	22.457	28.258	1.00	16.55	C
	ATOM	682	CD2	LEU	A	88	14.696	20.405	28.411	1.00	16.00	C
	ATOM	683	N	PRO	A	89	18.969	20.370	26.058	1.00	15.44	N
	ATOM	684	CA	PRO	A	89	19.862	19.217	26.120	1.00	15.41	C
50	ATOM	685	C	PRO	A	89	19.082	18.051	26.703	1.00	15.17	C
	ATOM	686	O	PRO	A	89	18.248	18.176	27.631	1.00	14.69	O
	ATOM	687	CB	PRO	A	89	21.036	19.606	27.042	1.00	15.65	C
	ATOM	688	CG	PRO	A	89	20.869	21.083	27.115	1.00	15.43	C
	ATOM	689	CD	PRO	A	89	19.403	21.455	26.923	1.00	12.94	C
55	ATOM	690	N	ASP	A	90	19.234	16.866	26.126	1.00	12.82	N
	ATOM	691	CA	ASP	A	90	18.521	15.656	26.505	1.00	16.10	C
	ATOM	692	C	ASP	A	90	17.005	15.834	26.379	1.00	19.34	C
	ATOM	693	O	ASP	A	90	16.188	15.366	27.198	1.00	17.20	O
	ATOM	694	CB	ASP	A	90	18.860	15.221	27.942	1.00	13.45	C

	ATOM	695	CG	ASP	A	90	20.270	14.653	28.032	1.00 24.51	C
	ATOM	696	OD1	ASP	A	90	20.987	14.711	27.006	1.00 19.04	O
	ATOM	697	OD2	ASP	A	90	20.643	14.173	29.132	1.00 18.33	O
	ATOM	698	N	ARG	A	91	16.643	16.574	25.345	1.00 13.43	N
5	ATOM	699	CA	ARG	A	91	15.274	16.893	24.957	1.00 14.50	C
	ATOM	700	C	ARG	A	91	14.362	15.679	24.953	1.00 14.98	C
	ATOM	701	O	ARG	A	91	14.786	14.585	24.580	1.00 15.76	O
	ATOM	702	CB	ARG	A	91	15.330	17.432	23.511	1.00 13.98	C
	ATOM	703	CG	ARG	A	91	14.190	18.399	23.179	1.00 13.34	C
10	ATOM	704	CD	ARG	A	91	14.482	19.165	21.896	1.00 13.92	C
	ATOM	705	NE	ARG	A	91	14.392	18.287	20.703	1.00 13.23	N
	ATOM	706	CZ	ARG	A	91	14.566	18.799	19.485	1.00 12.35	C
	ATOM	707	NH1	ARG	A	91	14.823	20.077	19.201	1.00 13.29	N
	ATOM	708	NH2	ARG	A	91	14.487	17.914	18.456	1.00 14.70	N
15	ATOM	709	N	ASP	A	92	13.125	15.846	25.494	1.00 11.96	N
	ATOM	710	CA	ASP	A	92	12.175	14.744	25.570	1.00 17.95	C
	ATOM	711	C	ASP	A	92	12.803	13.526	26.251	1.00 15.83	C
	ATOM	712	O	ASP	A	92	12.795	12.409	25.748	1.00 13.78	O
	ATOM	713	CB	ASP	A	92	11.670	14.338	24.184	1.00 14.41	C
20	ATOM	714	CG	ASP	A	92	10.927	15.477	23.512	1.00 16.54	C
	ATOM	715	OD1	ASP	A	92	9.841	15.800	24.048	1.00 18.60	O
	ATOM	716	OD2	ASP	A	92	11.358	16.080	22.499	1.00 16.72	O
	ATOM	717	N	CYS	A	93	13.231	13.758	27.514	1.00 14.74	N
	ATOM	718	CA	CYS	A	93	14.057	12.726	28.159	1.00 18.87	C
25	ATOM	719	C	CYS	A	93	13.371	11.401	28.341	1.00 16.21	C
	ATOM	720	O	CYS	A	93	13.982	10.318	28.447	1.00 21.36	O
	ATOM	721	CB	CYS	A	93	14.638	13.268	29.478	1.00 17.56	C
	ATOM	722	SG	CYS	A	93	13.408	13.566	30.760	1.00 17.27	S
	ATOM	723	N	SER	A	94	12.030	11.356	28.441	1.00 17.34	N
30	ATOM	724	CA	SER	A	94	11.314	10.116	28.685	1.00 19.63	C
	ATOM	725	C	SER	A	94	11.521	9.075	27.608	1.00 22.85	C
	ATOM	726	O	SER	A	94	11.374	7.890	27.948	1.00 23.92	O
	ATOM	727	CB	SER	A	94	9.826	10.341	28.937	1.00 18.36	C
	ATOM	728	OG	ASER	A	94	9.631	10.981	30.198	0.50 18.80	O
35	ATOM	729	OG	BSER	A	94	9.246	11.173	27.951	0.50 20.11	O
	ATOM	730	N	ALA	A	95	11.995	9.428	26.413	1.00 18.96	N
	ATOM	731	CA	ALA	A	95	12.274	8.454	25.376	1.00 23.37	C
	ATOM	732	C	ALA	A	95	13.675	7.868	25.545	1.00 20.16	C
	ATOM	733	O	ALA	A	95	13.983	6.871	24.895	1.00 21.70	O
40	ATOM	734	CB	ALA	A	95	12.079	9.129	24.033	1.00 22.92	C
	ATOM	735	N	GLY	A	96	14.482	8.417	26.464	1.00 17.34	N
	ATOM	736	CA	GLY	A	96	15.756	7.783	26.787	1.00 16.87	C
	ATOM	737	C	GLY	A	96	17.013	8.322	26.168	1.00 17.95	C
	ATOM	738	O	GLY	A	96	18.124	7.930	26.541	1.00 19.74	O
45	ATOM	739	N	GLU	A	97	16.863	9.329	25.305	1.00 15.22	N
	ATOM	740	CA	GLU	A	97	18.012	9.956	24.639	1.00 14.61	C
	ATOM	741	C	GLU	A	97	17.522	11.306	24.118	1.00 14.63	C
	ATOM	742	O	GLU	A	97	16.351	11.361	23.733	1.00 16.47	O
	ATOM	743	CB	GLU	A	97	18.464	9.075	23.457	1.00 13.39	C
50	ATOM	744	CG	GLU	A	97	19.491	9.749	22.553	1.00 15.47	C
	ATOM	745	CD	GLU	A	97	19.803	8.954	21.307	1.00 18.25	C
	ATOM	746	OE1	GLU	A	97	18.951	8.168	20.843	1.00 16.69	O
	ATOM	747	OE2	GLU	A	97	20.919	9.159	20.768	1.00 24.69	O
	ATOM	748	N	SER	A	98	18.328	12.363	24.076	1.00 16.83	N
55	ATOM	749	CA	SER	A	98	17.811	13.612	23.483	1.00 15.37	C
	ATOM	750	C	SER	A	98	17.165	13.351	22.115	1.00 13.72	C
	ATOM	751	O	SER	A	98	17.722	12.667	21.288	1.00 18.18	O
	ATOM	752	CB	SER	A	98	18.961	14.591	23.250	1.00 13.25	C
	ATOM	753	OG	SER	A	98	18.475	15.843	22.800	1.00 14.77	O

	ATOM	754	N	SER	A	99	16.031	14.033	21.889	1.00	13.48	N
	ATOM	755	CA	SER	A	99	15.397	14.000	20.581	1.00	12.53	C
	ATOM	756	C	SER	A	99	16.013	15.107	19.702	1.00	13.29	C
	ATOM	757	O	SER	A	99	15.610	15.164	18.536	1.00	15.74	O
5	ATOM	758	CB	SER	A	99	13.894	14.283	20.703	1.00	14.05	C
	ATOM	759	OG	SER	A	99	13.664	15.522	21.322	1.00	13.06	O
	ATOM	760	N	GLY	A	100	16.896	15.925	20.256	1.00	14.54	N
	ATOM	761	CA	GLY	A	100	17.558	17.017	19.521	1.00	11.74	C
	ATOM	762	C	GLY	A	100	19.068	16.771	19.471	1.00	15.29	C
10	ATOM	763	O	GLY	A	100	19.642	15.757	19.892	1.00	15.03	O
	ATOM	764	N	GLU	A	101	19.770	17.796	18.993	1.00	12.15	N
	ATOM	765	CA	GLU	A	101	21.205	17.711	18.778	1.00	13.21	C
	ATOM	766	C	GLU	A	101	22.048	17.876	20.030	1.00	14.91	C
	ATOM	767	O	GLU	A	101	23.240	17.482	19.964	1.00	15.83	O
15	ATOM	768	CB	GLU	A	101	21.613	18.752	17.710	1.00	14.60	C
	ATOM	769	CG	GLU	A	101	21.471	20.171	18.302	1.00	14.60	C
	ATOM	770	CD	GLU	A	101	21.410	21.197	17.188	1.00	16.09	C
	ATOM	771	OE1	GLU	A	101	21.582	20.878	15.990	1.00	14.91	O
	ATOM	772	OE2	GLU	A	101	21.171	22.369	17.547	1.00	14.19	O
20	ATOM	773	N	LEU	A	102	21.483	18.344	21.140	1.00	14.14	N
	ATOM	774	CA	LEU	A	102	22.247	18.594	22.362	1.00	15.84	C
	ATOM	775	C	LEU	A	102	22.010	17.503	23.401	1.00	13.78	C
	ATOM	776	O	LEU	A	102	20.907	17.058	23.637	1.00	13.84	O
	ATOM	777	CB	LEU	A	102	21.902	19.952	22.983	1.00	14.72	C
25	ATOM	778	CG	LEU	A	102	22.083	21.148	22.052	1.00	13.44	C
	ATOM	779	CD1	LEU	A	102	21.767	22.432	22.815	1.00	15.55	C
	ATOM	780	CD2	LEU	A	102	23.493	21.236	21.498	1.00	15.65	C
	ATOM	781	N	LYS	A	103	23.123	17.055	23.946	1.00	15.05	N
	ATOM	782	CA	LYS	A	103	23.126	16.009	24.981	1.00	18.34	C
30	ATOM	783	C	LYS	A	103	23.906	16.514	26.181	1.00	17.23	C
	ATOM	784	O	LYS	A	103	24.975	17.124	26.013	1.00	16.83	O
	ATOM	785	CB	LYS	A	103	23.780	14.739	24.415	1.00	15.93	C
	ATOM	786	CG	LYS	A	103	23.064	14.205	23.170	1.00	14.26	C
	ATOM	787	CD	LYS	A	103	23.580	12.857	22.734	1.00	20.35	C
35	ATOM	788	CE	LYS	A	103	22.554	12.151	21.828	1.00	18.89	C
	ATOM	789	NZ	LYS	A	103	23.106	10.796	21.493	1.00	20.43	N
	ATOM	790	N	LEU	A	104	23.408	16.241	27.385	1.00	17.62	N
	ATOM	791	CA	LEU	A	104	24.102	16.750	28.573	1.00	19.92	C
	ATOM	792	C	LEU	A	104	25.507	16.188	28.674	1.00	19.44	C
40	ATOM	793	O	LEU	A	104	26.416	16.961	28.996	1.00	18.23	O
	ATOM	794	CB	LEU	A	104	23.292	16.527	29.844	1.00	14.04	C
	ATOM	795	CG	LEU	A	104	22.010	17.371	29.962	1.00	17.18	C
	ATOM	796	CD1	LEU	A	104	21.202	16.833	31.126	1.00	18.42	C
	ATOM	797	CD2	LEU	A	104	22.366	18.840	30.141	1.00	17.13	C
45	ATOM	798	N	SER	A	105	25.691	14.929	28.284	1.00	18.96	N
	ATOM	799	CA	SER	A	105	27.001	14.293	28.324	1.00	20.51	C
	ATOM	800	C	SER	A	105	27.940	14.733	27.209	1.00	23.29	C
	ATOM	801	O	SER	A	105	29.071	14.218	27.138	1.00	23.43	O
	ATOM	802	CB	SER	A	105	26.769	12.775	28.282	1.00	21.63	C
50	ATOM	803	OG	SER	A	105	26.052	12.401	27.118	1.00	18.93	O
	ATOM	804	N	GLN	A	106	27.535	15.630	26.320	1.00	21.97	N
	ATOM	805	CA	GLN	A	106	28.345	16.194	25.269	1.00	16.00	C
	ATOM	806	C	GLN	A	106	28.348	17.712	25.417	1.00	18.59	C
	ATOM	807	O	GLN	A	106	28.097	18.485	24.485	1.00	18.41	O
55	ATOM	808	CB	GLN	A	106	27.885	15.789	23.863	1.00	16.42	C
	ATOM	809	CG	GLN	A	106	27.863	14.274	23.614	1.00	19.64	C
	ATOM	810	CD	GLN	A	106	27.231	13.951	22.265	1.00	30.90	C
	ATOM	811	OE1	GLN	A	106	26.602	14.783	21.593	1.00	24.11	O
	ATOM	812	NE2	GLN	A	106	27.373	12.676	21.882	1.00	24.20	N

	ATOM	813	N	ASN	A	107	28.624	18.165	26.651	1.00	17.89	N
	ATOM	814	CA	ASN	A	107	28.697	19.566	27.024	1.00	16.26	C
	ATOM	815	C	ASN	A	107	27.422	20.303	26.625	1.00	18.05	C
	ATOM	816	O	ASN	A	107	27.448	21.473	26.294	1.00	20.14	O
5	ATOM	817	CB	ASN	A	107	29.928	20.225	26.384	1.00	19.79	C
	ATOM	818	CG	ASN	A	107	30.297	21.606	26.886	1.00	17.57	C
	ATOM	819	OD1	ASN	A	107	30.798	22.410	26.077	1.00	26.88	O
	ATOM	820	ND2	ASN	A	107	30.122	21.937	28.157	1.00	15.24	N
	ATOM	821	N	GLY	A	108	26.284	19.631	26.678	1.00	18.99	N
10	ATOM	822	CA	GLY	A	108	25.043	20.199	26.134	1.00	13.67	C
	ATOM	823	C	GLY	A	108	24.518	21.427	26.811	1.00	16.60	C
	ATOM	824	O	GLY	A	108	23.943	22.317	26.149	1.00	16.83	O
	ATOM	825	N	LEU	A	109	24.644	21.522	28.134	1.00	15.55	N
	ATOM	826	CA	LEU	A	109	24.209	22.706	28.828	1.00	17.89	C
15	ATOM	827	C	LEU	A	109	24.961	23.942	28.372	1.00	15.95	C
	ATOM	828	O	LEU	A	109	24.352	24.949	28.010	1.00	15.07	O
	ATOM	829	CB	LEU	A	109	24.335	22.490	30.355	1.00	21.55	C
	ATOM	830	CG	LEU	A	109	23.899	23.758	31.092	1.00	16.19	C
	ATOM	831	CD1	LEU	A	109	22.397	23.997	30.832	1.00	23.18	C
20	ATOM	832	CD2	LEU	A	109	24.129	23.642	32.589	1.00	19.38	C
	ATOM	833	N	ASN	A	110	26.304	23.883	28.269	1.00	17.29	N
	ATOM	834	CA	ASN	A	110	27.036	25.042	27.788	1.00	20.46	C
	ATOM	835	C	ASN	A	110	26.684	25.408	26.347	1.00	18.61	C
	ATOM	836	O	ASN	A	110	26.533	26.598	26.066	1.00	19.34	O
25	ATOM	837	CB	ASN	A	110	28.560	24.824	27.887	1.00	23.88	C
	ATOM	838	CG	ASN	A	110	29.020	25.013	29.319	1.00	27.93	C
	ATOM	839	OD1	ASN	A	110	29.893	24.295	29.839	1.00	30.25	O
	ATOM	840	ND2	ASN	A	110	28.426	25.997	29.984	1.00	32.83	N
	ATOM	841	N	ARG	A	111	26.536	24.438	25.456	1.00	20.77	N
30	ATOM	842	CA	ARG	A	111	26.220	24.652	24.042	1.00	17.52	C
	ATOM	843	C	ARG	A	111	24.806	25.273	23.901	1.00	12.78	C
	ATOM	844	O	ARG	A	111	24.605	26.179	23.096	1.00	16.87	O
	ATOM	845	CB	ARG	A	111	26.333	23.376	23.231	1.00	19.76	C
	ATOM	846	CG	ARG	A	111	27.693	22.673	23.233	1.00	20.68	C
35	ATOM	847	CD	ARG	A	111	27.628	21.341	22.482	1.00	19.60	C
	ATOM	848	NE	ARG	A	111	29.014	20.871	22.251	1.00	24.33	N
	ATOM	849	CZ	ARG	A	111	29.280	19.666	21.733	1.00	25.75	C
	ATOM	850	NH1	ARG	A	111	28.329	18.817	21.355	1.00	23.72	N
	ATOM	851	NH2	ARG	A	111	30.563	19.339	21.577	1.00	28.92	N
40	ATOM	852	N	TYR	A	112	23.886	24.784	24.736	1.00	16.65	N
	ATOM	853	CA	TYR	A	112	22.542	25.373	24.766	1.00	17.96	C
	ATOM	854	C	TYR	A	112	22.594	26.844	25.170	1.00	15.90	C
	ATOM	855	O	TYR	A	112	21.966	27.683	24.518	1.00	16.47	O
	ATOM	856	CB	TYR	A	112	21.660	24.671	25.767	1.00	17.04	C
45	ATOM	857	CG	TYR	A	112	20.209	25.072	25.859	1.00	13.37	C
	ATOM	858	CD1	TYR	A	112	19.281	24.698	24.901	1.00	16.21	C
	ATOM	859	CD2	TYR	A	112	19.783	25.793	26.956	1.00	15.93	C
	ATOM	860	CE1	TYR	A	112	17.941	25.064	25.062	1.00	15.95	C
	ATOM	861	CE2	TYR	A	112	18.444	26.143	27.118	1.00	18.62	C
50	ATOM	862	CZ	TYR	A	112	17.529	25.757	26.153	1.00	17.89	C
	ATOM	863	OH	TYR	A	112	16.211	26.118	26.334	1.00	14.52	O
	ATOM	864	N	LYS	A	113	23.349	27.159	26.241	1.00	16.36	N
	ATOM	865	CA	LYS	A	113	23.430	28.607	26.528	1.00	17.52	C
	ATOM	866	C	LYS	A	113	24.110	29.426	25.443	1.00	18.91	C
55	ATOM	867	O	LYS	A	113	23.591	30.478	25.023	1.00	17.56	O
	ATOM	868	CB	LYS	A	113	24.226	28.828	27.825	1.00	18.04	C
	ATOM	869	CG	LYS	A	113	23.621	28.083	28.988	1.00	16.40	C
	ATOM	870	CD	LYS	A	113	24.470	28.340	30.255	1.00	23.83	C
	ATOM	871	CE	LYS	A	113	23.682	27.860	31.470	1.00	24.00	C

ATOM	872	NZ	LYS	A	113	24.572	27.690	32.648	1.00	30.37	N
ATOM	873	N	ASN	A	114	25.331	29.043	25.055	1.00	17.28	N
ATOM	874	CA	ASN	A	114	26.162	29.880	24.208	1.00	19.38	C
ATOM	875	C	ASN	A	114	25.897	29.777	22.727	1.00	19.48	C
ATOM	876	O	ASN	A	114	26.052	30.807	22.048	1.00	17.22	O
ATOM	877	CB	ASN	A	114	27.650	29.525	24.511	1.00	24.81	C
ATOM	878	CG	ASN	A	114	27.899	29.742	26.006	1.00	24.65	C
ATOM	879	OD1	ASN	A	114	27.481	30.742	26.575	1.00	31.58	O
ATOM	880	ND2	ASN	A	114	28.549	28.810	26.686	1.00	36.52	N
ATOM	881	N	GLU	A	115	25.496	28.635	22.218	1.00	16.28	N
ATOM	882	CA	GLU	A	115	25.288	28.484	20.787	1.00	14.50	C
ATOM	883	C	GLU	A	115	23.802	28.539	20.394	1.00	15.88	C
ATOM	884	O	GLU	A	115	23.602	28.663	19.175	1.00	16.27	O
ATOM	885	CB	GLU	A	115	25.885	27.144	20.316	1.00	19.55	C
ATOM	886	CG	GLU	A	115	27.406	27.095	20.373	1.00	22.17	C
ATOM	887	CD	GLU	A	115	27.970	25.805	19.793	1.00	22.87	C
ATOM	888	OE1	GLU	A	115	27.790	25.506	18.589	1.00	27.70	O
ATOM	889	OE2	GLU	A	115	28.558	25.016	20.552	1.00	23.83	O
ATOM	890	N	TYR	A	116	22.906	28.446	21.387	1.00	15.52	N
ATOM	891	CA	TYR	A	116	21.481	28.462	21.014	1.00	17.64	C
ATOM	892	C	TYR	A	116	20.716	29.588	21.719	1.00	16.03	C
ATOM	893	O	TYR	A	116	20.259	30.450	20.953	1.00	15.92	O
ATOM	894	CB	TYR	A	116	20.872	27.073	21.205	1.00	13.83	C
ATOM	895	CG	TYR	A	116	19.393	27.030	20.870	1.00	13.56	C
ATOM	896	CD1	TYR	A	116	18.953	26.958	19.553	1.00	13.73	C
ATOM	897	CD2	TYR	A	116	18.451	27.119	21.875	1.00	13.86	C
ATOM	898	CE1	TYR	A	116	17.593	26.953	19.239	1.00	13.57	C
ATOM	899	CE2	TYR	A	116	17.074	27.119	21.576	1.00	14.58	C
ATOM	900	CZ	TYR	A	116	16.674	27.016	20.267	1.00	15.69	C
ATOM	901	OH	TYR	A	116	15.326	27.015	19.946	1.00	13.22	O
ATOM	902	N	VAL	A	117	20.689	29.631	23.048	1.00	17.46	N
ATOM	903	CA	VAL	A	117	19.957	30.735	23.679	1.00	13.96	C
ATOM	904	C	VAL	A	117	20.588	32.097	23.387	1.00	14.91	C
ATOM	905	O	VAL	A	117	19.864	33.020	22.982	1.00	15.45	O
ATOM	906	CB	VAL	A	117	19.824	30.480	25.193	1.00	14.52	C
ATOM	907	CG1	VAL	A	117	19.161	31.623	25.904	1.00	16.06	C
ATOM	908	CG2	VAL	A	117	18.994	29.189	25.400	1.00	13.31	C
ATOM	909	N	ASN	A	118	21.917	32.244	23.509	1.00	18.31	N
ATOM	910	CA	ASN	A	118	22.459	33.596	23.271	1.00	14.39	C
ATOM	911	C	ASN	A	118	22.109	34.178	21.939	1.00	13.82	C
ATOM	912	O	ASN	A	118	21.577	35.308	21.869	1.00	18.34	O
ATOM	913	CB	ASN	A	118	23.952	33.624	23.584	1.00	14.65	C
ATOM	914	CG	ASN	A	118	24.168	33.447	25.071	1.00	15.75	C
ATOM	915	OD1	ASN	A	118	23.329	33.421	25.965	1.00	19.36	O
ATOM	916	ND2	ASN	A	118	25.470	33.291	25.396	1.00	17.69	N
ATOM	917	N	PRO	A	119	22.313	33.482	20.856	1.00	13.44	N
ATOM	918	CA	PRO	A	119	22.025	33.949	19.513	1.00	12.82	C
ATOM	919	C	PRO	A	119	20.532	34.203	19.352	1.00	19.27	C
ATOM	920	O	PRO	A	119	20.144	35.160	18.669	1.00	15.57	O
ATOM	921	CB	PRO	A	119	22.616	33.003	18.473	1.00	19.42	C
ATOM	922	CG	PRO	A	119	23.256	31.959	19.330	1.00	25.27	C
ATOM	923	CD	PRO	A	119	23.073	32.222	20.803	1.00	18.21	C
ATOM	924	N	PHE	A	120	19.712	33.365	19.971	1.00	16.00	N
ATOM	925	CA	PHE	A	120	18.271	33.558	19.941	1.00	17.20	C
ATOM	926	C	PHE	A	120	17.931	34.921	20.561	1.00	15.58	C
ATOM	927	O	PHE	A	120	17.244	35.731	19.920	1.00	16.71	O
ATOM	928	CB	PHE	A	120	17.575	32.443	20.722	1.00	14.76	C
ATOM	929	CG	PHE	A	120	16.127	32.181	20.415	1.00	14.80	C
ATOM	930	CD1	PHE	A	120	15.135	33.137	20.606	1.00	13.11	C

	ATOM	931	CD2	PHE A 120	15.811	30.899	19.974	1.00 16.69	C
	ATOM	932	CE1	PHE A 120	13.826	32.780	20.356	1.00 15.61	C
	ATOM	933	CE2	PHE A 120	14.501	30.528	19.727	1.00 14.01	C
	ATOM	934	CZ	PHE A 120	13.525	31.502	19.905	1.00 15.53	C
5	ATOM	935	N	ALA A 121	18.517	35.154	21.734	1.00 14.93	N
	ATOM	936	CA	ALA A 121	18.220	36.414	22.434	1.00 15.88	C
	ATOM	937	C	ALA A 121	18.742	37.624	21.686	1.00 17.20	C
	ATOM	938	O	ALA A 121	18.061	38.658	21.692	1.00 18.44	O
	ATOM	939	CB	ALA A 121	18.765	36.348	23.837	1.00 16.02	C
10	ATOM	940	N	GLN A 122	19.903	37.496	21.070	1.00 19.30	N
	ATOM	941	CA	GLN A 122	20.493	38.612	20.326	1.00 15.89	C
	ATOM	942	C	GLN A 122	19.552	39.054	19.218	1.00 19.44	C
	ATOM	943	O	GLN A 122	19.306	40.256	19.035	1.00 17.37	O
	ATOM	944	CB	GLN A 122	21.839	38.182	19.716	1.00 17.87	C
15	ATOM	945	CG	GLN A 122	22.486	39.243	18.821	1.00 28.60	C
	ATOM	946	CD	GLN A 122	23.758	38.701	18.187	1.00 38.44	C
	ATOM	947	OE1	GLN A 122	24.263	37.620	18.507	1.00 38.79	O
	ATOM	948	NE2	GLN A 122	24.324	39.459	17.253	1.00 33.90	N
	ATOM	949	N	LYS A 123	19.049	38.076	18.443	1.00 17.09	N
20	ATOM	950	CA	LYS A 123	18.160	38.404	17.337	1.00 16.59	C
	ATOM	951	C	LYS A 123	16.855	39.041	17.785	1.00 14.92	C
	ATOM	952	O	LYS A 123	16.394	40.013	17.186	1.00 16.41	O
	ATOM	953	CB	LYS A 123	17.793	37.060	16.645	1.00 16.25	C
	ATOM	954	CG	LYS A 123	18.976	36.600	15.780	1.00 17.30	C
25	ATOM	955	CD	LYS A 123	18.545	35.275	15.127	1.00 20.49	C
	ATOM	956	CE	LYS A 123	19.754	34.575	14.492	1.00 18.08	C
	ATOM	957	NZ	LYS A 123	20.333	35.361	13.386	1.00 22.16	N
	ATOM	958	N	LEU A 124	16.276	38.563	18.893	1.00 15.41	N
	ATOM	959	CA	LEU A 124	15.018	39.180	19.341	1.00 13.86	C
30	ATOM	960	C	LEU A 124	15.260	40.546	19.983	1.00 17.17	C
	ATOM	961	O	LEU A 124	14.435	41.432	19.748	1.00 19.88	O
	ATOM	962	CB	LEU A 124	14.280	38.258	20.315	1.00 15.51	C
	ATOM	963	CG	LEU A 124	13.315	37.246	19.683	1.00 15.13	C
	ATOM	964	CD1	LEU A 124	14.037	36.293	18.737	1.00 17.75	C
35	ATOM	965	CD2	LEU A 124	12.708	36.415	20.806	1.00 15.78	C
	ATOM	966	N	LYS A 125	16.333	40.712	20.751	1.00 15.59	N
	ATOM	967	CA	LYS A 125	16.557	42.023	21.399	1.00 16.00	C
	ATOM	968	C	LYS A 125	16.931	43.048	20.348	1.00 21.55	C
	ATOM	969	O	LYS A 125	16.623	44.235	20.538	1.00 21.82	O
40	ATOM	970	CB	LYS A 125	17.618	41.910	22.503	1.00 18.83	C
	ATOM	971	CG	LYS A 125	17.099	41.184	23.743	1.00 20.04	C
	ATOM	972	CD	LYS A 125	18.175	41.020	24.821	1.00 18.92	C
	ATOM	973	CE	LYS A 125	17.525	40.401	26.050	1.00 21.03	C
	ATOM	974	NZ	LYS A 125	18.489	40.092	27.118	1.00 22.21	N
45	ATOM	975	N	ALA A 126	17.534	42.650	19.231	1.00 17.28	N
	ATOM	976	CA	ALA A 126	17.842	43.631	18.166	1.00 13.39	C
	ATOM	977	C	ALA A 126	16.568	44.077	17.483	1.00 19.73	C
	ATOM	978	O	ALA A 126	16.429	45.242	17.085	1.00 22.21	O
	ATOM	979	CB	ALA A 126	18.817	43.020	17.172	1.00 21.36	C
50	ATOM	980	N	ALA A 127	15.578	43.182	17.380	1.00 20.52	N
	ATOM	981	CA	ALA A 127	14.338	43.538	16.686	1.00 21.72	C
	ATOM	982	C	ALA A 127	13.312	44.074	17.657	1.00 19.05	C
	ATOM	983	O	ALA A 127	12.205	43.547	17.850	1.00 17.22	O
	ATOM	984	CB	ALA A 127	13.813	42.301	15.934	1.00 15.16	C
55	ATOM	985	N	SER A 128	13.624	45.197	18.304	1.00 18.37	N
	ATOM	986	CA	SER A 128	12.805	45.859	19.306	1.00 22.55	C
	ATOM	987	C	SER A 128	11.468	46.408	18.805	1.00 20.88	C
	ATOM	988	O	SER A 128	10.576	46.703	19.612	1.00 19.69	O
	ATOM	989	CB	SER A 128	13.606	47.005	19.943	1.00 18.62	C

	ATOM	990	OG	ASER	A	128	14.055	46.604	21.223	0.30	23.23	O
	ATOM	991	OG	BSER	A	128	14.073	47.950	19.019	0.70	16.43	O
	ATOM	992	N	ASP	A	129	11.327	46.525	17.506	1.00	19.68	N
	ATOM	993	CA	ASP	A	129	10.194	46.960	16.749	1.00	20.35	C
5	ATOM	994	C	ASP	A	129	9.193	45.823	16.508	1.00	24.26	C
	ATOM	995	O	ASP	A	129	8.088	46.035	16.017	1.00	24.84	O
	ATOM	996	CB	ASP	A	129	10.637	47.474	15.372	1.00	18.77	C
	ATOM	997	CG	ASP	A	129	11.386	46.503	14.498	1.00	24.11	C
	ATOM	998	OD1	ASP	A	129	12.305	45.798	14.988	1.00	22.58	O
10	ATOM	999	OD2	ASP	A	129	11.170	46.385	13.273	1.00	23.69	O
	ATOM	1000	N	VAL	A	130	9.631	44.595	16.790	1.00	19.32	N
	ATOM	1001	CA	VAL	A	130	8.732	43.454	16.572	1.00	19.81	C
	ATOM	1002	C	VAL	A	130	8.239	42.838	17.866	1.00	16.92	C
	ATOM	1003	O	VAL	A	130	8.997	42.653	18.818	1.00	17.20	O
15	ATOM	1004	CB	VAL	A	130	9.533	42.417	15.749	1.00	14.96	C
	ATOM	1005	CG1	VAL	A	130	8.736	41.144	15.490	1.00	22.58	C
	ATOM	1006	CG2	VAL	A	130	9.963	43.040	14.417	1.00	16.89	C
	ATOM	1007	N	GLN	A	131	6.940	42.453	17.883	1.00	16.00	N
	ATOM	1008	CA	GLN	A	131	6.467	41.776	19.092	1.00	17.10	C
20	ATOM	1009	C	GLN	A	131	6.631	40.255	18.958	1.00	15.89	C
	ATOM	1010	O	GLN	A	131	6.252	39.764	17.885	1.00	18.07	O
	ATOM	1011	CB	GLN	A	131	4.966	42.099	19.344	1.00	15.42	C
	ATOM	1012	CG	GLN	A	131	4.836	43.607	19.652	1.00	19.47	C
	ATOM	1013	CD	GLN	A	131	5.269	43.973	21.054	1.00	18.68	C
25	ATOM	1014	OE1	GLN	A	131	5.002	43.270	22.033	1.00	21.52	O
	ATOM	1015	NE2	GLN	A	131	5.997	45.089	21.171	1.00	23.09	N
	ATOM	1016	N	PHE	A	132	7.089	39.584	20.007	1.00	14.56	N
	ATOM	1017	CA	PHE	A	132	7.284	38.147	19.930	1.00	15.44	C
	ATOM	1018	C	PHE	A	132	6.559	37.406	21.041	1.00	19.18	C
30	ATOM	1019	O	PHE	A	132	6.544	37.825	22.201	1.00	16.83	O
	ATOM	1020	CB	PHE	A	132	8.787	37.804	20.110	1.00	13.70	C
	ATOM	1021	CG	PHE	A	132	9.705	38.310	19.036	1.00	12.58	C
	ATOM	1022	CD1	PHE	A	132	9.937	37.640	17.844	1.00	14.61	C
	ATOM	1023	CD2	PHE	A	132	10.297	39.565	19.184	1.00	14.89	C
35	ATOM	1024	CE1	PHE	A	132	10.763	38.155	16.888	1.00	16.67	C
	ATOM	1025	CE2	PHE	A	132	11.098	40.101	18.195	1.00	14.44	C
	ATOM	1026	CZ	PHE	A	132	11.377	39.390	17.039	1.00	24.08	C
	ATOM	1027	N	ALA	A	133	5.966	36.272	20.665	1.00	13.43	N
	ATOM	1028	CA	ALA	A	133	5.450	35.323	21.629	1.00	12.38	C
40	ATOM	1029	C	ALA	A	133	6.337	34.058	21.520	1.00	16.52	C
	ATOM	1030	O	ALA	A	133	6.392	33.482	20.436	1.00	14.68	O
	ATOM	1031	CB	ALA	A	133	4.033	34.835	21.390	1.00	13.99	C
	ATOM	1032	N	VAL	A	134	7.053	33.780	22.595	1.00	13.32	N
	ATOM	1033	CA	VAL	A	134	7.990	32.652	22.516	1.00	14.91	C
45	ATOM	1034	C	VAL	A	134	7.502	31.562	23.433	1.00	15.83	C
	ATOM	1035	O	VAL	A	134	7.346	31.694	24.636	1.00	14.31	O
	ATOM	1036	CB	VAL	A	134	9.423	33.077	22.932	1.00	14.14	C
	ATOM	1037	CG1	VAL	A	134	10.355	31.869	22.932	1.00	12.93	C
	ATOM	1038	CG2	VAL	A	134	9.927	34.185	22.031	1.00	15.66	C
50	ATOM	1039	N	ILE	A	135	7.293	30.362	22.869	1.00	11.12	N
	ATOM	1040	CA	ILE	A	135	6.941	29.189	23.589	1.00	11.50	C
	ATOM	1041	C	ILE	A	135	8.257	28.518	23.987	1.00	12.31	C
	ATOM	1042	O	ILE	A	135	9.110	28.250	23.147	1.00	14.89	O
	ATOM	1043	CB	ILE	A	135	6.038	28.247	22.790	1.00	12.69	C
55	ATOM	1044	CG1	ILE	A	135	4.654	28.910	22.741	1.00	11.65	C
	ATOM	1045	CG2	ILE	A	135	6.039	26.855	23.412	1.00	13.80	C
	ATOM	1046	CD1	ILE	A	135	3.609	28.073	21.999	1.00	13.61	C
	ATOM	1047	N	LEU	A	136	8.344	28.301	25.297	1.00	13.71	N
	ATOM	1048	CA	LEU	A	136	9.575	27.726	25.781	1.00	12.72	C

	ATOM	1049	C	LEU	A	136	9.461	26.231	26.045	1.00	10.83	C
	ATOM	1050	O	LEU	A	136	8.802	25.712	26.924	1.00	13.13	O
	ATOM	1051	CB	LEU	A	136	10.030	28.354	27.100	1.00	12.51	C
	ATOM	1052	CG	LEU	A	136	10.209	29.869	27.074	1.00	16.39	C
5	ATOM	1053	CD1	LEU	A	136	10.168	30.365	28.507	1.00	15.36	C
	ATOM	1054	CD2	LEU	A	136	11.501	30.220	26.353	1.00	18.35	C
	ATOM	1055	N	GLU	A	137	10.284	25.506	25.301	1.00	12.51	N
	ATOM	1056	CA	GLU	A	137	10.564	24.096	25.410	1.00	14.89	C
	ATOM	1057	C	GLU	A	137	9.404	23.159	25.670	1.00	11.61	C
10	ATOM	1058	O	GLU	A	137	9.116	22.614	26.758	1.00	13.87	O
	ATOM	1059	CB	GLU	A	137	11.622	23.904	26.533	1.00	12.34	C
	ATOM	1060	CG	GLU	A	137	12.972	24.554	26.230	1.00	13.28	C
	ATOM	1061	CD	GLU	A	137	13.743	23.890	25.071	1.00	12.17	C
	ATOM	1062	OE1	GLU	A	137	13.360	22.784	24.653	1.00	11.92	O
15	ATOM	1063	OE2	GLU	A	137	14.762	24.465	24.687	1.00	13.65	O
	ATOM	1064	N	PRO	A	138	8.640	22.899	24.631	1.00	12.86	N
	ATOM	1065	CA	PRO	A	138	7.510	21.986	24.623	1.00	8.34	C
	ATOM	1066	C	PRO	A	138	7.864	20.672	25.317	1.00	14.11	C
	ATOM	1067	O	PRO	A	138	8.894	20.035	25.171	1.00	12.67	O
20	ATOM	1068	CB	PRO	A	138	7.175	21.749	23.148	1.00	13.80	C
	ATOM	1069	CG	PRO	A	138	7.626	23.075	22.551	1.00	14.20	C
	ATOM	1070	CD	PRO	A	138	8.896	23.480	23.286	1.00	14.92	C
	ATOM	1071	N	ASP	A	139	6.963	20.237	26.190	1.00	13.22	N
	ATOM	1072	CA	ASP	A	139	6.937	19.052	26.998	1.00	14.09	C
25	ATOM	1073	C	ASP	A	139	8.046	18.965	28.040	1.00	15.12	C
	ATOM	1074	O	ASP	A	139	8.124	17.912	28.658	1.00	15.93	O
	ATOM	1075	CB	ASP	A	139	6.914	17.744	26.167	1.00	13.10	C
	ATOM	1076	CG	ASP	A	139	5.615	17.654	25.399	1.00	15.49	C
	ATOM	1077	OD1	ASP	A	139	4.615	18.248	25.910	1.00	14.68	O
30	ATOM	1078	OD2	ASP	A	139	5.546	16.987	24.341	1.00	18.06	O
	ATOM	1079	N	ALA	A	140	8.932	19.959	28.186	1.00	14.06	N
	ATOM	1080	CA	ALA	A	140	10.039	19.789	29.147	1.00	13.79	C
	ATOM	1081	C	ALA	A	140	9.464	19.621	30.554	1.00	15.47	C
	ATOM	1082	O	ALA	A	140	9.906	18.741	31.254	1.00	17.78	O
35	ATOM	1083	CB	ALA	A	140	11.006	20.969	29.099	1.00	12.43	C
	ATOM	1084	N	ILE	A	141	8.568	20.517	30.944	1.00	15.62	N
	ATOM	1085	CA	ILE	A	141	7.991	20.357	32.313	1.00	14.08	C
	ATOM	1086	C	ILE	A	141	7.253	19.069	32.503	1.00	19.31	C
	ATOM	1087	O	ILE	A	141	7.331	18.423	33.567	1.00	20.35	O
40	ATOM	1088	CB	ILE	A	141	7.160	21.607	32.590	1.00	16.62	C
	ATOM	1089	CG1	ILE	A	141	8.134	22.779	32.763	1.00	22.60	C
	ATOM	1090	CG2	ILE	A	141	6.308	21.455	33.857	1.00	20.87	C
	ATOM	1091	CD1	ILE	A	141	7.414	24.098	32.915	1.00	22.62	C
	ATOM	1092	N	GLY	A	142	6.559	18.556	31.485	1.00	16.46	N
45	ATOM	1093	CA	GLY	A	142	5.894	17.256	31.563	1.00	17.32	C
	ATOM	1094	C	GLY	A	142	6.924	16.182	31.917	1.00	19.41	C
	ATOM	1095	O	GLY	A	142	6.728	15.401	32.840	1.00	18.39	O
	ATOM	1096	N	ASN	A	143	8.024	16.143	31.179	1.00	18.77	N
	ATOM	1097	CA	ASN	A	143	9.090	15.165	31.396	1.00	18.65	C
50	ATOM	1098	C	ASN	A	143	9.720	15.333	32.774	1.00	25.02	C
	ATOM	1099	O	ASN	A	143	10.147	14.331	33.374	1.00	24.01	O
	ATOM	1100	CB	ASN	A	143	10.076	15.318	30.241	1.00	16.63	C
	ATOM	1101	CG	ASN	A	143	9.715	14.612	28.954	1.00	15.12	C
	ATOM	1102	OD1	ASN	A	143	9.886	13.401	28.887	1.00	25.88	O
55	ATOM	1103	ND2	ASN	A	143	9.252	15.382	27.980	1.00	17.49	N
	ATOM	1104	N	MET	A	144	9.786	16.550	33.303	1.00	18.94	N
	ATOM	1105	CA	MET	A	144	10.307	16.798	34.636	1.00	26.82	C
	ATOM	1106	C	MET	A	144	9.372	16.318	35.746	1.00	32.01	C
	ATOM	1107	O	MET	A	144	9.881	15.713	36.711	1.00	35.38	O

	ATOM	1108	CB	MET A 144	10.542	18.287	34.866	1.00 27.38	C
	ATOM	1109	CG	MET A 144	11.979	18.760	34.828	1.00 37.46	C
	ATOM	1110	SD	MET A 144	11.961	20.522	34.459	1.00 41.27	S
	ATOM	1111	CE	MET A 144	12.279	20.503	32.697	1.00 16.91	C
5	ATOM	1112	N	VAL A 145	8.072	16.516	35.629	1.00 28.09	N
	ATOM	1113	CA	VAL A 145	7.098	16.068	36.618	1.00 27.59	C
	ATOM	1114	C	VAL A 145	6.868	14.570	36.679	1.00 34.48	C
	ATOM	1115	O	VAL A 145	6.650	13.976	37.744	1.00 34.53	O
	ATOM	1116	CB	VAL A 145	5.704	16.703	36.353	1.00 28.57	C
10	ATOM	1117	CG1	VAL A 145	4.575	16.007	37.108	1.00 36.94	C
	ATOM	1118	CG2	VAL A 145	5.701	18.182	36.679	1.00 30.18	C
	ATOM	1119	N	THR A 146	6.732	13.920	35.538	1.00 25.46	N
	ATOM	1120	CA	THR A 146	6.393	12.500	35.516	1.00 27.86	C
	ATOM	1121	C	THR A 146	7.560	11.630	35.097	1.00 27.16	C
15	ATOM	1122	O	THR A 146	7.452	10.404	35.049	1.00 31.17	O
	ATOM	1123	CB	THR A 146	5.176	12.309	34.591	1.00 31.04	C
	ATOM	1124	OG1	THR A 146	5.574	12.739	33.275	1.00 24.62	O
	ATOM	1125	CG2	THR A 146	3.993	13.150	35.046	1.00 38.27	C
	ATOM	1126	N	GLY A 147	8.703	12.234	34.779	1.00 22.60	N
20	ATOM	1127	CA	GLY A 147	9.856	11.498	34.294	1.00 22.02	C
	ATOM	1128	C	GLY A 147	10.643	10.820	35.411	1.00 22.12	C
	ATOM	1129	O	GLY A 147	11.517	11.476	35.968	1.00 25.38	O
	ATOM	1130	N	THR A 148	10.389	9.547	35.668	1.00 22.71	N
	ATOM	1131	CA	THR A 148	11.132	8.866	36.740	1.00 22.82	C
25	ATOM	1132	C	THR A 148	12.224	7.909	36.295	1.00 27.70	C
	ATOM	1133	O	THR A 148	12.851	7.257	37.145	1.00 24.98	O
	ATOM	1134	CB	THR A 148	10.158	8.034	37.602	1.00 26.91	C
	ATOM	1135	OG1	THR A 148	9.501	7.109	36.735	1.00 32.28	O
	ATOM	1136	CG2	THR A 148	9.145	8.931	38.302	1.00 25.46	C
30	ATOM	1137	N	SER A 149	12.449	7.803	34.991	1.00 24.08	N
	ATOM	1138	CA	SER A 149	13.513	6.934	34.489	1.00 21.87	C
	ATOM	1139	C	SER A 149	14.846	7.513	34.922	1.00 21.61	C
	ATOM	1140	O	SER A 149	15.002	8.706	35.238	1.00 22.03	O
	ATOM	1141	CB	SER A 149	13.419	6.882	32.948	1.00 20.36	C
35	ATOM	1142	OG	SER A 149	13.890	8.171	32.486	1.00 23.85	O
	ATOM	1143	N	ALA A 150	15.871	6.669	34.978	1.00 22.79	N
	ATOM	1144	CA	ALA A 150	17.213	7.091	35.329	1.00 23.93	C
	ATOM	1145	C	ALA A 150	17.705	8.217	34.438	1.00 22.88	C
	ATOM	1146	O	ALA A 150	18.224	9.216	34.903	1.00 21.44	O
40	ATOM	1147	CB	ALA A 150	18.141	5.880	35.220	1.00 27.97	C
	ATOM	1148	N	PHE A 151	17.467	8.078	33.129	1.00 23.42	N
	ATOM	1149	CA	PHE A 151	17.883	9.112	32.198	1.00 16.87	C
	ATOM	1150	C	PHE A 151	17.269	10.473	32.486	1.00 10.90	C
	ATOM	1151	O	PHE A 151	17.979	11.482	32.471	1.00 20.09	O
45	ATOM	1152	CB	PHE A 151	17.583	8.620	30.780	1.00 18.22	C
	ATOM	1153	CG	PHE A 151	18.153	9.589	29.751	1.00 18.83	C
	ATOM	1154	CD1	PHE A 151	19.497	9.662	29.502	1.00 18.91	C
	ATOM	1155	CD2	PHE A 151	17.293	10.422	29.056	1.00 21.05	C
	ATOM	1156	CE1	PHE A 151	20.013	10.525	28.570	1.00 19.18	C
50	ATOM	1157	CE2	PHE A 151	17.784	11.288	28.099	1.00 20.98	C
	ATOM	1158	CZ	PHE A 151	19.148	11.362	27.870	1.00 18.15	C
	ATOM	1159	N	CYS A 152	15.965	10.573	32.683	1.00 16.28	N
	ATOM	1160	CA	CYS A 152	15.344	11.860	33.014	1.00 15.15	C
	ATOM	1161	C	CYS A 152	15.785	12.443	34.358	1.00 18.37	C
55	ATOM	1162	O	CYS A 152	16.001	13.661	34.510	1.00 20.83	O
	ATOM	1163	CB	CYS A 152	13.816	11.744	33.144	1.00 21.04	C
	ATOM	1164	SG	CYS A 152	12.996	11.728	31.528	1.00 18.91	S
	ATOM	1165	N	ARG A 153	15.898	11.539	35.327	1.00 22.50	N
	ATOM	1166	CA	ARG A 153	16.290	11.972	36.679	1.00 18.82	C

	ATOM	1167	C	ARG	A	153	17.682	12.565	36.676	1.00 19.45	C
	ATOM	1168	O	ARG	A	153	18.000	13.552	37.359	1.00 22.29	O
	ATOM	1169	CB	ARG	A	153	16.170	10.769	37.639	1.00 22.11	C
	ATOM	1170	CG	ARG	A	153	14.729	10.397	37.953	1.00 23.68	C
5	ATOM	1171	CD	ARG	A	153	14.613	9.459	39.159	1.00 24.90	C
	ATOM	1172	NE	ARG	A	153	15.024	8.085	38.873	1.00 22.17	N
	ATOM	1173	CZ	ARG	A	153	16.145	7.558	39.389	1.00 19.83	C
	ATOM	1174	NH1	ARG	A	153	16.919	8.263	40.199	1.00 20.95	N
	ATOM	1175	NH2	ARG	A	153	16.417	6.317	39.040	1.00 23.59	N
10	ATOM	1176	N	ASN	A	154	18.555	12.017	35.832	1.00 17.62	N
	ATOM	1177	CA	ASN	A	154	19.891	12.505	35.625	1.00 22.93	C
	ATOM	1178	C	ASN	A	154	19.944	13.851	34.912	1.00 23.27	C
	ATOM	1179	O	ASN	A	154	20.981	14.497	34.968	1.00 27.40	O
	ATOM	1180	CB	ASN	A	154	20.693	11.525	34.745	1.00 31.91	C
15	ATOM	1181	CG	ASN	A	154	21.708	10.799	35.600	1.00 40.14	C
	ATOM	1182	OD1	ASN	A	154	22.689	11.414	36.026	1.00 39.02	O
	ATOM	1183	ND2	ASN	A	154	21.455	9.522	35.834	1.00 45.43	N
	ATOM	1184	N	ALA	A	155	18.926	14.179	34.145	1.00 18.21	N
	ATOM	1185	CA	ALA	A	155	18.859	15.400	33.361	1.00 20.94	C
20	ATOM	1186	C	ALA	A	155	18.123	16.554	34.032	1.00 21.85	C
	ATOM	1187	O	ALA	A	155	18.222	17.717	33.652	1.00 17.04	O
	ATOM	1188	CB	ALA	A	155	18.080	15.044	32.076	1.00 24.09	C
	ATOM	1189	N	ARG	A	156	17.357	16.210	35.068	1.00 20.11	N
	ATOM	1190	CA	ARG	A	156	16.464	17.138	35.759	1.00 26.10	C
25	ATOM	1191	C	ARG	A	156	17.140	18.440	36.145	1.00 23.61	C
	ATOM	1192	O	ARG	A	156	16.738	19.539	35.711	1.00 19.66	O
	ATOM	1193	CB	ARG	A	156	15.851	16.443	36.986	1.00 22.71	C
	ATOM	1194	CG	ARG	A	156	14.935	17.330	37.849	1.00 22.00	C
	ATOM	1195	CD	ARG	A	156	14.180	16.552	38.884	1.00 33.46	C
30	ATOM	1196	NE	ARG	A	156	12.937	16.977	39.460	1.00 37.06	N
	ATOM	1197	CZ	ARG	A	156	11.980	17.789	39.076	1.00 36.95	C
	ATOM	1198	NH1	ARG	A	156	12.104	18.423	37.923	1.00 42.13	N
	ATOM	1199	NH2	ARG	A	156	10.914	18.011	39.839	1.00 35.77	N
	ATOM	1200	N	GLY	A	157	18.179	18.376	36.968	1.00 23.96	N
35	ATOM	1201	CA	GLY	A	157	18.945	19.511	37.459	1.00 23.34	C
	ATOM	1202	C	GLY	A	157	19.376	20.503	36.404	1.00 26.04	C
	ATOM	1203	O	GLY	A	157	19.006	21.685	36.305	1.00 18.02	O
	ATOM	1204	N	PRO	A	158	20.199	20.029	35.458	1.00 21.24	N
	ATOM	1205	CA	PRO	A	158	20.703	20.821	34.357	1.00 15.71	C
40	ATOM	1206	C	PRO	A	158	19.562	21.320	33.473	1.00 16.28	C
	ATOM	1207	O	PRO	A	158	19.615	22.448	32.934	1.00 18.27	O
	ATOM	1208	CB	PRO	A	158	21.654	19.887	33.571	1.00 19.23	C
	ATOM	1209	CG	PRO	A	158	22.064	18.906	34.666	1.00 20.64	C
	ATOM	1210	CD	PRO	A	158	20.797	18.692	35.492	1.00 22.65	C
45	ATOM	1211	N	GLN	A	159	18.499	20.542	33.322	1.00 17.51	N
	ATOM	1212	CA	GLN	A	159	17.421	21.043	32.433	1.00 20.20	C
	ATOM	1213	C	GLN	A	159	16.707	22.221	33.072	1.00 20.95	C
	ATOM	1214	O	GLN	A	159	16.347	23.201	32.396	1.00 19.79	O
	ATOM	1215	CB	GLN	A	159	16.470	19.942	31.991	1.00 16.22	C
50	ATOM	1216	CG	GLN	A	159	17.047	18.970	30.976	1.00 15.45	C
	ATOM	1217	CD	GLN	A	159	16.000	17.932	30.596	1.00 17.65	C
	ATOM	1218	OE1	GLN	A	159	15.070	17.662	31.333	1.00 19.74	O
	ATOM	1219	NE2	GLN	A	159	16.150	17.353	29.418	1.00 16.86	N
	ATOM	1220	N	GLN	A	160	16.549	22.207	34.393	1.00 19.49	N
55	ATOM	1221	CA	GLN	A	160	15.933	23.343	35.084	1.00 20.57	C
	ATOM	1222	C	GLN	A	160	16.804	24.574	34.939	1.00 18.11	C
	ATOM	1223	O	GLN	A	160	16.350	25.689	34.671	1.00 17.46	O
	ATOM	1224	CB	GLN	A	160	15.666	23.065	36.554	1.00 22.41	C
	ATOM	1225	CG	GLN	A	160	14.623	21.977	36.821	1.00 27.14	C

	ATOM	1226	CD	GLN A	160	14.497	21.713	38.312	1.00 33.51	C
	ATOM	1227	OE1	GLN A	160	15.338	22.146	39.102	1.00 44.68	O
	ATOM	1228	NE2	GLN A	160	13.483	20.991	38.760	1.00 33.51	N
	ATOM	1229	N	GLU A	161	18.131	24.381	35.068	1.00 17.66	N
5	ATOM	1230	CA	GLU A	161	19.072	25.468	34.873	1.00 18.15	C
	ATOM	1231	C	GLU A	161	19.028	25.979	33.429	1.00 20.38	C
	ATOM	1232	O	GLU A	161	19.076	27.188	33.196	1.00 20.25	O
	ATOM	1233	CB	GLU A	161	20.503	25.022	35.222	1.00 20.40	C
	ATOM	1234	CG	GLU A	161	21.530	26.108	34.926	1.00 26.49	C
10	ATOM	1235	CD	GLU A	161	22.926	25.765	35.413	1.00 32.47	C
	ATOM	1236	OE1	GLU A	161	23.055	24.829	36.231	1.00 29.68	O
	ATOM	1237	OE2	GLU A	161	23.896	26.436	34.997	1.00 33.32	O
	ATOM	1238	N	ALA A	162	18.891	25.063	32.456	1.00 21.33	N
	ATOM	1239	CA	ALA A	162	18.805	25.494	31.068	1.00 18.84	C
15	ATOM	1240	C	ALA A	162	17.588	26.379	30.799	1.00 16.13	C
	ATOM	1241	O	ALA A	162	17.703	27.406	30.123	1.00 16.11	O
	ATOM	1242	CB	ALA A	162	18.721	24.318	30.095	1.00 17.53	C
	ATOM	1243	N	ILE A	163	16.436	25.946	31.297	1.00 17.98	N
	ATOM	1244	CA	ILE A	163	15.206	26.713	31.030	1.00 14.97	C
20	ATOM	1245	C	ILE A	163	15.241	28.062	31.757	1.00 18.57	C
	ATOM	1246	O	ILE A	163	14.916	29.148	31.234	1.00 16.69	O
	ATOM	1247	CB	ILE A	163	13.981	25.889	31.412	1.00 17.85	C
	ATOM	1248	CG1	ILE A	163	13.861	24.602	30.579	1.00 19.40	C
	ATOM	1249	CG2	ILE A	163	12.753	26.776	31.167	1.00 22.22	C
25	ATOM	1250	CD1	ILE A	163	12.644	23.748	30.917	1.00 18.79	C
	ATOM	1251	N	GLY A	164	15.741	28.003	33.013	1.00 20.77	N
	ATOM	1252	CA	GLY A	164	15.870	29.267	33.766	1.00 17.85	C
	ATOM	1253	C	GLY A	164	16.780	30.222	33.012	1.00 15.29	C
	ATOM	1254	O	GLY A	164	16.565	31.430	33.021	1.00 20.23	O
30	ATOM	1255	N	TYR A	165	17.854	29.674	32.412	1.00 17.68	N
	ATOM	1256	CA	TYR A	165	18.766	30.488	31.651	1.00 14.10	C
	ATOM	1257	C	TYR A	165	18.089	31.131	30.436	1.00 17.53	C
	ATOM	1258	O	TYR A	165	18.269	32.328	30.188	1.00 19.89	O
	ATOM	1259	CB	TYR A	165	20.018	29.700	31.213	1.00 12.38	C
35	ATOM	1260	CG	TYR A	165	20.983	30.576	30.444	1.00 17.60	C
	ATOM	1261	CD1	TYR A	165	21.894	31.360	31.178	1.00 19.80	C
	ATOM	1262	CD2	TYR A	165	21.050	30.678	29.074	1.00 18.96	C
	ATOM	1263	CE1	TYR A	165	22.771	32.196	30.527	1.00 20.15	C
	ATOM	1264	CE2	TYR A	165	21.922	31.525	28.423	1.00 20.01	C
40	ATOM	1265	CZ	TYR A	165	22.809	32.288	29.158	1.00 17.49	C
	ATOM	1266	OH	TYR A	165	23.706	33.124	28.549	1.00 21.23	O
	ATOM	1267	N	ALA A	166	17.258	30.328	29.773	1.00 16.23	N
	ATOM	1268	CA	ALA A	166	16.539	30.882	28.616	1.00 16.91	C
	ATOM	1269	C	ALA A	166	15.573	31.997	29.042	1.00 15.92	C
45	ATOM	1270	O	ALA A	166	15.608	33.036	28.368	1.00 16.18	O
	ATOM	1271	CB	ALA A	166	15.810	29.697	27.993	1.00 15.30	C
	ATOM	1272	N	ILE A	167	14.870	31.833	30.160	1.00 16.04	N
	ATOM	1273	CA	ILE A	167	13.983	32.893	30.634	1.00 16.03	C
	ATOM	1274	C	ILE A	167	14.836	34.112	30.968	1.00 17.37	C
50	ATOM	1275	O	ILE A	167	14.478	35.231	30.619	1.00 16.76	O
	ATOM	1276	CB	ILE A	167	13.211	32.456	31.886	1.00 14.55	C
	ATOM	1277	CG1	ILE A	167	12.262	31.286	31.540	1.00 20.02	C
	ATOM	1278	CG2	ILE A	167	12.380	33.571	32.515	1.00 16.28	C
	ATOM	1279	CD1	ILE A	167	11.683	30.536	32.720	1.00 18.04	C
55	ATOM	1280	N	SER A	168	15.938	33.863	31.701	1.00 19.53	N
	ATOM	1281	CA	SER A	168	16.787	34.999	32.105	1.00 21.13	C
	ATOM	1282	C	SER A	168	17.281	35.813	30.932	1.00 19.30	C
	ATOM	1283	O	SER A	168	17.511	37.031	31.058	1.00 19.82	O
	ATOM	1284	CB	SER A	168	17.975	34.532	32.958	1.00 21.41	C

	ATOM	1285	OG	SER	A	168	19.078	33.943	32.267	1.00	20.79	O
	ATOM	1286	N	GLN	A	169	17.566	35.192	29.786	1.00	15.41	N
	ATOM	1287	CA	GLN	A	169	18.084	35.921	28.646	1.00	14.97	C
	ATOM	1288	C	GLN	A	169	17.052	36.594	27.745	1.00	15.50	C
5	ATOM	1289	O	GLN	A	169	17.444	37.311	26.826	1.00	17.12	O
	ATOM	1290	CB	GLN	A	169	18.887	34.976	27.726	1.00	16.43	C
	ATOM	1291	CG	GLN	A	169	20.239	34.598	28.343	1.00	18.51	C
	ATOM	1292	CD	GLN	A	169	21.179	35.766	28.084	1.00	17.43	C
	ATOM	1293	OE1	GLN	A	169	21.376	36.223	26.946	1.00	21.30	O
10	ATOM	1294	NE2	GLN	A	169	21.702	36.323	29.165	1.00	18.42	N
	ATOM	1295	N	LEU	A	170	15.767	36.358	27.972	1.00	16.44	N
	ATOM	1296	CA	LEU	A	170	14.716	36.849	27.106	1.00	18.88	C
	ATOM	1297	C	LEU	A	170	13.745	37.780	27.801	1.00	19.41	C
	ATOM	1298	O	LEU	A	170	12.524	37.701	27.642	1.00	18.95	O
15	ATOM	1299	CB	LEU	A	170	13.946	35.619	26.545	1.00	16.72	C
	ATOM	1300	CG	LEU	A	170	14.844	34.795	25.607	1.00	12.75	C
	ATOM	1301	CD1	LEU	A	170	14.174	33.440	25.307	1.00	12.96	C
	ATOM	1302	CD2	LEU	A	170	15.157	35.480	24.300	1.00	15.61	C
	ATOM	1303	N	GLN	A	171	14.283	38.632	28.694	1.00	18.55	N
20	ATOM	1304	CA	GLN	A	171	13.418	39.609	29.362	1.00	18.48	C
	ATOM	1305	C	GLN	A	171	13.442	40.916	28.568	1.00	20.27	C
	ATOM	1306	O	GLN	A	171	14.508	41.531	28.466	1.00	22.91	O
	ATOM	1307	CB	GLN	A	171	13.958	39.868	30.763	1.00	18.70	C
	ATOM	1308	CG	GLN	A	171	13.960	38.733	31.738	1.00	20.71	C
25	ATOM	1309	CD	GLN	A	171	12.579	38.204	32.086	1.00	28.28	C
	ATOM	1310	OE1	GLN	A	171	11.751	38.921	32.646	1.00	26.82	O
	ATOM	1311	NE2	GLN	A	171	12.355	36.945	31.756	1.00	18.32	N
	ATOM	1312	N	ALA	A	172	12.326	41.329	27.990	1.00	22.62	N
	ATOM	1313	CA	ALA	A	172	12.253	42.585	27.236	1.00	18.98	C
30	ATOM	1314	C	ALA	A	172	10.780	42.954	27.087	1.00	23.47	C
	ATOM	1315	O	ALA	A	172	9.943	42.041	27.155	1.00	22.25	O
	ATOM	1316	CB	ALA	A	172	12.896	42.466	25.877	1.00	19.85	C
	ATOM	1317	N	SER	A	173	10.416	44.223	26.924	1.00	21.36	N
	ATOM	1318	CA	SER	A	173	8.994	44.537	26.823	1.00	25.83	C
35	ATOM	1319	C	SER	A	173	8.326	44.033	25.553	1.00	24.83	C
	ATOM	1320	O	SER	A	173	7.092	43.994	25.534	1.00	22.13	O
	ATOM	1321	CB	SER	A	173	8.821	46.056	26.951	1.00	23.74	C
	ATOM	1322	OG	SER	A	173	9.243	46.705	25.773	1.00	29.00	O
	ATOM	1323	N	HIS	A	174	9.065	43.646	24.512	1.00	17.75	N
40	ATOM	1324	CA	HIS	A	174	8.492	43.188	23.265	1.00	17.50	C
	ATOM	1325	C	HIS	A	174	8.600	41.658	23.132	1.00	16.39	C
	ATOM	1326	O	HIS	A	174	8.197	41.102	22.124	1.00	17.58	O
	ATOM	1327	CB	HIS	A	174	9.116	43.875	22.050	1.00	17.07	C
	ATOM	1328	CG	HIS	A	174	10.579	43.533	21.916	1.00	20.56	C
45	ATOM	1329	ND1	HIS	A	174	11.527	43.924	22.837	1.00	21.16	N
	ATOM	1330	CD2	HIS	A	174	11.226	42.822	20.967	1.00	20.15	C
	ATOM	1331	CE1	HIS	A	174	12.711	43.476	22.448	1.00	13.95	C
	ATOM	1332	NE2	HIS	A	174	12.559	42.762	21.333	1.00	18.66	N
	ATOM	1333	N	ILE	A	175	9.091	41.040	24.204	1.00	19.18	N
50	ATOM	1334	CA	ILE	A	175	9.207	39.573	24.216	1.00	15.87	C
	ATOM	1335	C	ILE	A	175	8.289	39.008	25.292	1.00	17.27	C
	ATOM	1336	O	ILE	A	175	8.399	39.307	26.485	1.00	18.00	O
	ATOM	1337	CB	ILE	A	175	10.648	39.123	24.522	1.00	23.04	C
	ATOM	1338	CG1	ILE	A	175	11.644	39.643	23.490	1.00	19.39	C
55	ATOM	1339	CG2	ILE	A	175	10.705	37.589	24.597	1.00	17.36	C
	ATOM	1340	CD1	ILE	A	175	13.104	39.351	23.876	1.00	16.58	C
	ATOM	1341	N	HIS	A	176	7.338	38.143	24.885	1.00	15.25	N
	ATOM	1342	CA	HIS	A	176	6.341	37.569	25.775	1.00	18.06	C
	ATOM	1343	C	HIS	A	176	6.522	36.060	25.891	1.00	17.50	C

	ATOM	1344	O	HIS	A	176	6.411	35.373	24.891	1.00	19.93	O
	ATOM	1345	CB	HIS	A	176	4.948	37.913	25.227	1.00	20.20	C
	ATOM	1346	CG	HIS	A	176	4.893	39.398	24.933	1.00	17.31	C
	ATOM	1347	ND1	HIS	A	176	4.705	40.329	25.945	1.00	23.89	N
5	ATOM	1348	CD2	HIS	A	176	5.080	40.067	23.785	1.00	16.22	C
	ATOM	1349	CE1	HIS	A	176	4.746	41.528	25.369	1.00	19.91	C
	ATOM	1350	NE2	HIS	A	176	4.966	41.415	24.080	1.00	17.72	N
	ATOM	1351	N	LEU	A	177	6.930	35.639	27.079	1.00	16.15	N
	ATOM	1352	CA	LEU	A	177	7.302	34.237	27.266	1.00	20.26	C
10	ATOM	1353	C	LEU	A	177	6.172	33.394	27.776	1.00	18.87	C
	ATOM	1354	O	LEU	A	177	5.507	33.721	28.751	1.00	17.54	O
	ATOM	1355	CB	LEU	A	177	8.505	34.179	28.213	1.00	16.68	C
	ATOM	1356	CG	LEU	A	177	9.750	34.949	27.759	1.00	20.48	C
	ATOM	1357	CD1	LEU	A	177	10.829	34.890	28.838	1.00	23.84	C
15	ATOM	1358	CD2	LEU	A	177	10.287	34.407	26.443	1.00	19.91	C
	ATOM	1359	N	TYR	A	178	5.971	32.234	27.121	1.00	15.13	N
	ATOM	1360	CA	TYR	A	178	4.968	31.268	27.522	1.00	16.57	C
	ATOM	1361	C	TYR	A	178	5.682	29.949	27.741	1.00	13.83	C
	ATOM	1362	O	TYR	A	178	6.202	29.325	26.803	1.00	16.26	O
20	ATOM	1363	CB	TYR	A	178	3.884	31.164	26.436	1.00	13.81	C
	ATOM	1364	CG	TYR	A	178	3.010	32.412	26.288	1.00	14.31	C
	ATOM	1365	CD1	TYR	A	178	1.871	32.534	27.089	1.00	13.04	C
	ATOM	1366	CD2	TYR	A	178	3.321	33.410	25.402	1.00	14.39	C
	ATOM	1367	CE1	TYR	A	178	1.042	33.643	26.958	1.00	13.10	C
25	ATOM	1368	CE2	TYR	A	178	2.528	34.539	25.279	1.00	14.79	C
	ATOM	1369	CZ	TYR	A	178	1.403	34.639	26.063	1.00	16.55	C
	ATOM	1370	OH	TYR	A	178	0.641	35.766	25.884	1.00	17.40	O
	ATOM	1371	N	LEU	A	179	5.784	29.489	28.974	1.00	13.35	N
	ATOM	1372	CA	LEU	A	179	6.462	28.249	29.352	1.00	17.07	C
30	ATOM	1373	C	LEU	A	179	5.542	27.065	29.143	1.00	19.44	C
	ATOM	1374	O	LEU	A	179	4.405	27.017	29.634	1.00	16.44	O
	ATOM	1375	CB	LEU	A	179	6.963	28.405	30.803	1.00	16.46	C
	ATOM	1376	CG	LEU	A	179	7.666	27.233	31.449	1.00	19.83	C
	ATOM	1377	CD1	LEU	A	179	8.937	26.875	30.675	1.00	15.49	C
35	ATOM	1378	CD2	LEU	A	179	8.015	27.580	32.907	1.00	23.07	C
	ATOM	1379	N	ASP	A	180	6.029	26.088	28.354	1.00	14.36	N
	ATOM	1380	CA	ASP	A	180	5.125	25.000	27.961	1.00	15.05	C
	ATOM	1381	C	ASP	A	180	4.761	24.105	29.111	1.00	13.43	C
	ATOM	1382	O	ASP	A	180	5.631	23.795	29.919	1.00	14.07	O
40	ATOM	1383	CB	ASP	A	180	5.781	24.192	26.800	1.00	12.47	C
	ATOM	1384	CG	ASP	A	180	4.684	23.234	26.354	1.00	13.76	C
	ATOM	1385	OD1	ASP	A	180	3.794	23.702	25.682	1.00	13.82	O
	ATOM	1386	OD2	ASP	A	180	4.713	22.059	26.727	1.00	13.22	O
	ATOM	1387	N	VAL	A	181	3.467	23.779	29.265	1.00	13.82	N
45	ATOM	1388	CA	VAL	A	181	3.027	22.841	30.278	1.00	16.72	C
	ATOM	1389	C	VAL	A	181	2.236	21.692	29.648	1.00	15.67	C
	ATOM	1390	O	VAL	A	181	1.300	21.117	30.214	1.00	16.61	O
	ATOM	1391	CB	VAL	A	181	2.254	23.512	31.436	1.00	15.74	C
	ATOM	1392	CG1	VAL	A	181	3.113	24.562	32.107	1.00	16.55	C
50	ATOM	1393	CG2	VAL	A	181	1.043	24.270	30.879	1.00	14.73	C
	ATOM	1394	N	ALA	A	182	2.766	21.112	28.559	1.00	15.84	N
	ATOM	1395	CA	ALA	A	182	2.257	19.878	27.954	1.00	11.85	C
	ATOM	1396	C	ALA	A	182	0.796	19.975	27.567	1.00	17.64	C
	ATOM	1397	O	ALA	A	182	0.425	20.845	26.796	1.00	16.55	O
55	ATOM	1398	CB	ALA	A	182	2.536	18.728	28.928	1.00	13.37	C
	ATOM	1399	N	ASN	A	183	-0.074	19.076	28.056	1.00	15.15	N
	ATOM	1400	CA	ASN	A	183	-1.496	19.177	27.691	1.00	16.26	C
	ATOM	1401	C	ASN	A	183	-2.265	18.644	28.894	1.00	17.26	C
	ATOM	1402	O	ASN	A	183	-1.684	17.994	29.777	1.00	18.17	O

	ATOM	1403	CB	ASN	A	183	-1.835	18.454	26.401	1.00	16.35	C
	ATOM	1404	CG	ASN	A	183	-1.767	16.965	26.559	1.00	17.94	C
	ATOM	1405	OD1	ASN	A	183	-2.792	16.319	26.797	1.00	16.51	O
	ATOM	1406	ND2	ASN	A	183	-0.582	16.382	26.436	1.00	18.25	N
5	ATOM	1407	N	GLY	A	184	-3.592	18.844	28.847	1.00	16.86	N
	ATOM	1408	CA	GLY	A	184	-4.388	18.416	30.015	1.00	19.04	C
	ATOM	1409	C	GLY	A	184	-4.359	16.935	30.329	1.00	21.08	C
	ATOM	1410	O	GLY	A	184	-4.483	16.535	31.490	1.00	19.31	O
	ATOM	1411	N	GLY	A	185	-4.123	16.070	29.349	1.00	15.52	N
10	ATOM	1412	CA	GLY	A	185	-4.026	14.643	29.525	1.00	18.46	C
	ATOM	1413	C	GLY	A	185	-2.809	14.180	30.305	1.00	17.75	C
	ATOM	1414	O	GLY	A	185	-2.746	13.069	30.846	1.00	22.14	O
	ATOM	1415	N	TRP	A	186	-1.764	14.986	30.239	1.00	15.80	N
	ATOM	1416	CA	TRP	A	186	-0.519	14.664	30.916	1.00	18.17	C
15	ATOM	1417	C	TRP	A	186	-0.515	15.232	32.333	1.00	24.27	C
	ATOM	1418	O	TRP	A	186	-0.289	14.510	33.294	1.00	23.57	O
	ATOM	1419	CB	TRP	A	186	0.639	15.315	30.122	1.00	17.51	C
	ATOM	1420	CG	TRP	A	186	2.016	14.820	30.460	1.00	18.20	C
	ATOM	1421	CD1	TRP	A	186	2.509	14.350	31.646	1.00	20.95	C
20	ATOM	1422	CD2	TRP	A	186	3.143	14.779	29.546	1.00	15.73	C
	ATOM	1423	NE1	TRP	A	186	3.840	13.989	31.533	1.00	21.92	N
	ATOM	1424	CE2	TRP	A	186	4.236	14.248	30.235	1.00	19.99	C
	ATOM	1425	CE3	TRP	A	186	3.305	15.112	28.191	1.00	20.33	C
	ATOM	1426	CZ2	TRP	A	186	5.493	14.056	29.657	1.00	22.00	C
25	ATOM	1427	CZ3	TRP	A	186	4.558	14.913	27.629	1.00	20.80	C
	ATOM	1428	CH2	TRP	A	186	5.640	14.413	28.347	1.00	17.58	C
	ATOM	1429	N	LEU	A	187	-0.720	16.532	32.461	1.00	19.08	N
	ATOM	1430	CA	LEU	A	187	-0.550	17.251	33.706	1.00	17.71	C
	ATOM	1431	C	LEU	A	187	-1.826	17.878	34.279	1.00	24.49	C
30	ATOM	1432	O	LEU	A	187	-1.705	18.631	35.261	1.00	21.87	O
	ATOM	1433	CB	LEU	A	187	0.449	18.392	33.475	1.00	17.69	C
	ATOM	1434	CG	LEU	A	187	1.845	17.972	32.991	1.00	19.27	C
	ATOM	1435	CD1	LEU	A	187	2.755	19.184	32.845	1.00	18.62	C
	ATOM	1436	CD2	LEU	A	187	2.406	16.956	33.963	1.00	17.99	C
35	ATOM	1437	N	GLY	A	188	-2.936	17.551	33.659	1.00	18.10	N
	ATOM	1438	CA	GLY	A	188	-4.232	18.107	34.068	1.00	21.65	C
	ATOM	1439	C	GLY	A	188	-4.939	17.303	35.143	1.00	21.97	C
	ATOM	1440	O	GLY	A	188	-5.921	17.793	35.701	1.00	24.01	O
	ATOM	1441	N	TRP	A	189	-4.503	16.086	35.398	1.00	22.20	N
40	ATOM	1442	CA	TRP	A	189	-5.096	15.289	36.469	1.00	22.87	C
	ATOM	1443	C	TRP	A	189	-4.970	16.007	37.799	1.00	25.04	C
	ATOM	1444	O	TRP	A	189	-4.080	16.805	38.040	1.00	27.88	O
	ATOM	1445	CB	TRP	A	189	-4.314	13.975	36.627	1.00	27.16	C
	ATOM	1446	CG	TRP	A	189	-4.390	13.238	35.316	1.00	22.25	C
45	ATOM	1447	CD1	TRP	A	189	-3.421	13.194	34.350	1.00	25.61	C
	ATOM	1448	CD2	TRP	A	189	-5.499	12.487	34.827	1.00	29.01	C
	ATOM	1449	NE1	TRP	A	189	-3.871	12.429	33.293	1.00	23.98	N
	ATOM	1450	CE2	TRP	A	189	-5.137	11.991	33.560	1.00	28.33	C
	ATOM	1451	CE3	TRP	A	189	-6.778	12.198	35.343	1.00	27.34	C
50	ATOM	1452	CZ2	TRP	A	189	-5.994	11.197	32.797	1.00	25.20	C
	ATOM	1453	CZ3	TRP	A	189	-7.609	11.402	34.572	1.00	36.57	C
	ATOM	1454	CH2	TRP	A	189	-7.230	10.916	33.313	1.00	33.11	C
	ATOM	1455	N	ALA	A	190	-5.857	15.619	38.712	1.00	29.58	N
	ATOM	1456	CA	ALA	A	190	-5.823	16.164	40.069	1.00	23.81	C
55	ATOM	1457	C	ALA	A	190	-4.469	16.087	40.736	1.00	21.28	C
	ATOM	1458	O	ALA	A	190	-3.950	17.088	41.228	1.00	31.06	O
	ATOM	1459	CB	ALA	A	190	-6.849	15.334	40.862	1.00	29.66	C
	ATOM	1460	N	ASP	A	191	-3.855	14.912	40.801	1.00	23.12	N
	ATOM	1461	CA	ASP	A	191	-2.557	14.712	41.428	1.00	27.43	C

	ATOM	1462	C	ASP A 191	-1.385	15.277	40.632	1.00	25.12	C
	ATOM	1463	O	ASP A 191	-0.266	15.091	41.114	1.00	27.19	O
	ATOM	1464	CB	ASP A 191	-2.325	13.225	41.691	1.00	32.82	C
	ATOM	1465	CG	ASP A 191	-1.922	12.405	40.483	1.00	39.62	C
5	ATOM	1466	OD1	ASP A 191	-2.175	12.787	39.317	1.00	36.24	O
	ATOM	1467	OD2	ASP A 191	-1.324	11.319	40.701	1.00	38.36	O
	ATOM	1468	N	LYS A 192	-1.604	15.905	39.475	1.00	26.92	N
	ATOM	1469	CA	LYS A 192	-0.546	16.487	38.698	1.00	24.87	C
	ATOM	1470	C	LYS A 192	-0.518	18.003	38.637	1.00	24.18	C
10	ATOM	1471	O	LYS A 192	0.548	18.530	38.317	1.00	23.32	O
	ATOM	1472	CB	LYS A 192	-0.617	16.067	37.212	1.00	25.77	C
	ATOM	1473	CG	LYS A 192	-0.373	14.587	36.992	1.00	29.05	C
	ATOM	1474	CD	LYS A 192	1.095	14.275	37.240	1.00	27.96	C
	ATOM	1475	CE	LYS A 192	1.222	13.128	38.227	1.00	45.28	C
15	ATOM	1476	NZ	LYS A 192	0.408	11.964	37.780	1.00	39.91	N
	ATOM	1477	N	LEU A 193	-1.596	18.697	38.966	1.00	25.73	N
	ATOM	1478	CA	LEU A 193	-1.610	20.157	38.900	1.00	21.89	C
	ATOM	1479	C	LEU A 193	-0.630	20.856	39.818	1.00	25.66	C
	ATOM	1480	O	LEU A 193	-0.012	21.880	39.460	1.00	21.93	O
20	ATOM	1481	CB	LEU A 193	-3.027	20.671	39.198	1.00	28.06	C
	ATOM	1482	CG	LEU A 193	-4.184	20.155	38.357	1.00	30.24	C
	ATOM	1483	CD1	LEU A 193	-5.493	20.353	39.123	1.00	29.65	C
	ATOM	1484	CD2	LEU A 193	-4.248	20.844	37.006	1.00	29.18	C
	ATOM	1485	N	GLU A 194	-0.506	20.349	41.057	1.00	25.45	N
25	ATOM	1486	CA	GLU A 194	0.444	21.002	41.980	1.00	28.77	C
	ATOM	1487	C	GLU A 194	1.888	20.693	41.663	1.00	23.06	C
	ATOM	1488	O	GLU A 194	2.726	21.586	41.561	1.00	24.93	O
	ATOM	1489	CB	GLU A 194	0.116	20.784	43.452	1.00	29.05	C
	ATOM	1490	CG	GLU A 194	-1.144	21.554	43.846	1.00	30.23	C
30	ATOM	1491	CD	GLU A 194	-0.983	23.063	43.816	1.00	25.96	C
	ATOM	1492	OE1	GLU A 194	0.158	23.580	43.710	1.00	28.60	O
	ATOM	1493	OE2	GLU A 194	-2.043	23.728	43.906	1.00	25.23	O
	ATOM	1494	N	PRO A 195	2.227	19.456	41.360	1.00	23.57	N
	ATOM	1495	CA	PRO A 195	3.575	19.085	40.953	1.00	22.27	C
35	ATOM	1496	C	PRO A 195	3.960	19.921	39.737	1.00	24.12	C
	ATOM	1497	O	PRO A 195	5.112	20.339	39.663	1.00	26.09	O
	ATOM	1498	CB	PRO A 195	3.555	17.581	40.620	1.00	26.84	C
	ATOM	1499	CG	PRO A 195	2.402	17.142	41.492	1.00	27.05	C
	ATOM	1500	CD	PRO A 195	1.377	18.276	41.509	1.00	23.97	C
40	ATOM	1501	N	THR A 196	3.011	20.243	38.851	1.00	24.28	N
	ATOM	1502	CA	THR A 196	3.316	21.124	37.717	1.00	25.48	C
	ATOM	1503	C	THR A 196	3.610	22.543	38.149	1.00	23.30	C
	ATOM	1504	O	THR A 196	4.576	23.199	37.736	1.00	25.84	O
	ATOM	1505	CB	THR A 196	2.137	21.128	36.715	1.00	20.97	C
45	ATOM	1506	OG1	THR A 196	1.985	19.758	36.314	1.00	28.42	O
	ATOM	1507	CG2	THR A 196	2.446	21.981	35.505	1.00	24.74	C
	ATOM	1508	N	ALA A 197	2.802	23.097	39.073	1.00	22.38	N
	ATOM	1509	CA	ALA A 197	3.073	24.439	39.568	1.00	18.61	C
	ATOM	1510	C	ALA A 197	4.376	24.556	40.331	1.00	17.24	C
50	ATOM	1511	O	ALA A 197	5.035	25.590	40.273	1.00	21.98	O
	ATOM	1512	CB	ALA A 197	1.914	24.910	40.464	1.00	22.57	C
	ATOM	1513	N	GLN A 198	4.751	23.492	41.045	1.00	25.96	N
	ATOM	1514	CA	GLN A 198	5.985	23.455	41.814	1.00	24.97	C
	ATOM	1515	C	GLN A 198	7.186	23.526	40.870	1.00	24.11	C
55	ATOM	1516	O	GLN A 198	8.171	24.217	41.114	1.00	25.56	O
	ATOM	1517	CB	GLN A 198	6.050	22.185	42.683	1.00	28.98	C
	ATOM	1518	CG	GLN A 198	7.336	22.134	43.531	1.00	24.27	C
	ATOM	1519	CD	GLN A 198	7.314	23.356	44.454	1.00	34.76	C
	ATOM	1520	OE1	GLN A 198	6.362	23.450	45.232	1.00	36.44	O

	ATOM	1521	NE2	GLN A 198	8.272	24.266	44.352	1.00	38.30	N
	ATOM	1522	N	GLU A 199	7.066	22.768	39.768	1.00	25.95	N
	ATOM	1523	CA	GLU A 199	8.129	22.788	38.753	1.00	25.16	C
	ATOM	1524	C	GLU A 199	8.329	24.172	38.183	1.00	21.81	C
5	ATOM	1525	O	GLU A 199	9.475	24.628	38.023	1.00	26.10	O
	ATOM	1526	CB	GLU A 199	7.821	21.778	37.656	1.00	27.77	C
	ATOM	1527	CG	GLU A 199	9.018	21.058	37.068	1.00	32.81	C
	ATOM	1528	CD	GLU A 199	10.146	20.739	38.020	1.00	36.59	C
	ATOM	1529	OE1	GLU A 199	9.946	20.366	39.186	1.00	33.97	O
10	ATOM	1530	OE2	GLU A 199	11.309	20.869	37.542	1.00	37.28	O
	ATOM	1531	N	VAL A 200	7.248	24.875	37.829	1.00	21.28	N
	ATOM	1532	CA	VAL A 200	7.337	26.244	37.348	1.00	17.50	C
	ATOM	1533	C	VAL A 200	7.929	27.150	38.425	1.00	18.55	C
	ATOM	1534	O	VAL A 200	8.756	27.994	38.109	1.00	22.64	O
15	ATOM	1535	CB	VAL A 200	5.925	26.698	36.913	1.00	20.34	C
	ATOM	1536	CG1	VAL A 200	5.890	28.166	36.596	1.00	18.70	C
	ATOM	1537	CG2	VAL A 200	5.443	25.853	35.727	1.00	20.27	C
	ATOM	1538	N	ALA A 201	7.481	26.973	39.688	1.00	22.75	N
	ATOM	1539	CA	ALA A 201	8.056	27.851	40.711	1.00	23.99	C
20	ATOM	1540	C	ALA A 201	9.574	27.628	40.801	1.00	21.12	C
	ATOM	1541	O	ALA A 201	10.304	28.619	40.901	1.00	25.72	O
	ATOM	1542	CB	ALA A 201	7.402	27.722	42.071	1.00	31.11	C
	ATOM	1543	N	THR A 202	10.037	26.397	40.827	1.00	21.45	N
	ATOM	1544	CA	THR A 202	11.468	26.099	40.906	1.00	26.32	C
25	ATOM	1545	C	THR A 202	12.229	26.681	39.733	1.00	26.11	C
	ATOM	1546	O	THR A 202	13.303	27.249	39.932	1.00	27.66	O
	ATOM	1547	CB	THR A 202	11.678	24.581	40.980	1.00	26.18	C
	ATOM	1548	OG1	THR A 202	11.067	24.107	42.183	1.00	30.40	O
	ATOM	1549	CG2	THR A 202	13.147	24.200	40.939	1.00	27.67	C
30	ATOM	1550	N	ILE A 203	11.723	26.511	38.504	1.00	24.82	N
	ATOM	1551	CA	ILE A 203	12.363	27.083	37.334	1.00	21.56	C
	ATOM	1552	C	ILE A 203	12.438	28.596	37.366	1.00	24.19	C
	ATOM	1553	O	ILE A 203	13.453	29.168	36.940	1.00	25.72	O
	ATOM	1554	CB	ILE A 203	11.645	26.649	36.030	1.00	21.53	C
35	ATOM	1555	CG1	ILE A 203	12.036	25.183	35.809	1.00	27.33	C
	ATOM	1556	CG2	ILE A 203	11.963	27.516	34.829	1.00	21.78	C
	ATOM	1557	CD1	ILE A 203	11.091	24.441	34.901	1.00	23.73	C
	ATOM	1558	N	LEU A 204	11.384	29.267	37.808	1.00	26.14	N
	ATOM	1559	CA	LEU A 204	11.387	30.726	37.873	1.00	24.06	C
40	ATOM	1560	C	LEU A 204	12.383	31.235	38.912	1.00	24.89	C
	ATOM	1561	O	LEU A 204	13.069	32.248	38.691	1.00	28.09	O
	ATOM	1562	CB	LEU A 204	9.969	31.235	38.164	1.00	26.98	C
	ATOM	1563	CG	LEU A 204	9.041	31.157	36.934	1.00	24.81	C
	ATOM	1564	CD1	LEU A 204	7.638	31.604	37.285	1.00	22.92	C
45	ATOM	1565	CD2	LEU A 204	9.587	32.042	35.826	1.00	30.35	C
	ATOM	1566	N	GLN A 205	12.512	30.521	40.037	1.00	28.00	N
	ATOM	1567	CA	GLN A 205	13.533	30.926	41.015	1.00	29.64	C
	ATOM	1568	C	GLN A 205	14.920	30.924	40.374	1.00	33.03	C
	ATOM	1569	O	GLN A 205	15.684	31.869	40.569	1.00	33.55	O
50	ATOM	1570	CB	GLN A 205	13.567	30.012	42.225	1.00	31.06	C
	ATOM	1571	CG	GLN A 205	12.277	29.942	43.023	1.00	40.96	C
	ATOM	1572	CD	GLN A 205	12.403	28.925	44.147	1.00	53.67	C
	ATOM	1573	OE1	GLN A 205	11.542	28.067	44.360	1.00	58.84	O
	ATOM	1574	NE2	GLN A 205	13.509	29.019	44.879	1.00	57.55	N
55	ATOM	1575	N	LYS A 206	15.250	29.884	39.608	1.00	31.53	N
	ATOM	1576	CA	LYS A 206	16.521	29.777	38.912	1.00	30.90	C
	ATOM	1577	C	LYS A 206	16.725	30.823	37.838	1.00	28.64	C
	ATOM	1578	O	LYS A 206	17.869	31.293	37.679	1.00	35.87	O
	ATOM	1579	CB	LYS A 206	16.679	28.369	38.307	1.00	30.49	C

	ATOM	1580	CG	LYS	A	206	16.409	27.316	39.361	1.00	32.33	C
	ATOM	1581	CD	LYS	A	206	17.005	25.969	39.023	1.00	31.07	C
	ATOM	1582	CE	LYS	A	206	16.472	24.899	39.969	1.00	41.01	C
	ATOM	1583	NZ	LYS	A	206	16.780	25.229	41.395	1.00	49.48	N
5	ATOM	1584	N	ALA	A	207	15.684	31.325	37.196	1.00	25.35	N
	ATOM	1585	CA	ALA	A	207	15.793	32.401	36.215	1.00	25.49	C
	ATOM	1586	C	ALA	A	207	16.070	33.719	36.952	1.00	28.60	C
	ATOM	1587	O	ALA	A	207	16.637	34.636	36.375	1.00	33.48	O
	ATOM	1588	CB	ALA	A	207	14.551	32.572	35.347	1.00	21.82	C
10	ATOM	1589	N	GLY	A	208	15.672	33.737	38.228	1.00	24.19	N
	ATOM	1590	CA	GLY	A	208	16.054	34.891	39.047	1.00	29.70	C
	ATOM	1591	C	GLY	A	208	14.854	35.556	39.680	1.00	34.18	C
	ATOM	1592	O	GLY	A	208	13.713	35.180	39.440	1.00	34.37	O
	ATOM	1593	N	ASN	A	209	15.136	36.575	40.487	1.00	36.06	N
15	ATOM	1594	CA	ASN	A	209	14.093	37.337	41.139	1.00	42.26	C
	ATOM	1595	C	ASN	A	209	13.351	38.247	40.168	1.00	37.42	C
	ATOM	1596	O	ASN	A	209	12.116	38.192	40.188	1.00	44.08	O
	ATOM	1597	CB	ASN	A	209	14.620	38.188	42.294	1.00	48.61	C
	ATOM	1598	CG	ASN	A	209	15.196	37.459	43.479	1.00	54.89	C
20	ATOM	1599	OD1	ASN	A	209	15.546	38.114	44.474	1.00	61.55	O
	ATOM	1600	ND2	ASN	A	209	15.339	36.141	43.424	1.00	57.53	N
	ATOM	1601	N	ASN	A	210	13.994	39.030	39.320	1.00	38.97	N
	ATOM	1602	CA	ASN	A	210	13.295	39.964	38.445	1.00	39.96	C
	ATOM	1603	C	ASN	A	210	12.741	39.332	37.170	1.00	38.36	C
25	ATOM·	1604	O	ASN	A	210	12.022	39.980	36.417	1.00	42.09	O
	ATOM	1605	CB	ASN	A	210	14.158	41.176	38.091	1.00	39.67	·C
	ATOM	1606	CG	ASN	A	210	14.897	41.131	36.777	1.00	51.11	C
	ATOM	1607	OD1	ASN	A	210	15.937	40.479	36.659	1.00	54.23	O
	ATOM	1608	ND2	ASN	A	210	14.400	41.823	35.755	1.00	48.58	.N
30	ATOM	1609	N	ALA	A	211	13.091	38.082	36.921	1.00	40.09	N
	ATOM	1610	CA	ALA	A	211	12.648	37.337	35.764	1.00	33.43	C
	ATOM	1611	C	ALA	A	211	11.135	37.146	35.739	1.00	31.19	C
	ATOM	1612	O	ALA	A	211	10.524	36.870	36.773	1.00	34.58	O
	ATOM	1613	CB	ALA	A	211	13.297	35.955	35.811	1.00	28.11	C
35	ATOM	1614	N	LYS	A	212	10.554	37.288	34.545	1.00	25.79	N
	ATOM	1615	CA	LYS	A	212	9.120	36.999	34.492	1.00	24.00	C
	ATOM	1616	C	LYS	A	212	8.812	36.212	33.208	1.00	24.95	C
	ATOM	1617	O	LYS	A	212	9.542	36.287	32.230	1.00	22.45	O
	ATOM	1618	CB	LYS	A	212	8.174	38.183	34.496	1.00	32.81	C
40	ATOM	1619	CG	LYS	A	212	8.614	39.486	33.883	1.00	43.81	C
	ATOM	1620	CD	LYS	A	212	9.337	40.299	34.942	1.00	53.00	C
	ATOM	1621	CE	LYS	A	212	8.469	41.362	35.589	1.00	60.57	C
	ATOM	1622	NZ	LYS	A	212	9.336	42.506	36.020	1.00	61.75	N
	ATOM	1623	N	ILE	A	213	7.648	35.577	33.278	1.00	20.62	N
45	ATOM	1624	CA	ILE	A	213	7.049	34.967	32.109	1.00	19.54	C
	ATOM	1625	C	ILE	A	213	5.610	35.517	32.058	1.00	22.44	C
	ATOM	1626	O	ILE	A	213	5.102	35.955	33.109	1.00	19.92	O
	ATOM	1627	CB	ILE	A	213	7.008	33.436	32.102	1.00	20.33	C
	ATOM	1628	CG1	ILE	A	213	6.183	32.871	33.255	1.00	17.85	C
50	ATOM	1629	CG2	ILE	A	213	8.462	32.924	32.079	1.00	19.41	C
	ATOM	1630	CD1	ILE	A	213	6.300	31.354	33.414	1.00	17.47	C
	ATOM	1631	N	ARG	A	214	5.010	35.503	30.868	1.00	17.88	N
	ATOM	1632	CA	ARG	A	214	3.607	35.940	30.819	1.00	18.46	C
	ATOM	1633	C	ARG	A	214	2.685	34.838	31.295	1.00	21.26	C
55	ATOM	1634	O	ARG	A	214	1.614	35.037	31.864	1.00	17.92	O
	ATOM	1635	CB	ARG	A	214	3.248	36.367	29.389	1.00	19.56	C
	ATOM	1636	CG	ARG	A	214	1.749	36.458	29.110	1.00	23.23	C
	ATOM	1637	CD	ARG	A	214	1.110	37.594	29.907	1.00	18.30	C
	ATOM	1638	NE	ARG	A	214	-0.304	37.719	29.494	1.00	17.36	N

	ATOM	1639	CZ	ARG	A	214	-1.084	38.648	30.077	1.00	29.29	C
	ATOM	1640	NH1	ARG	A	214	-0.615	39.444	31.035	1.00	30.58	N
	ATOM	1641	NH2	ARG	A	214	-2.352	38.736	29.692	1.00	27.97	N
	ATOM	1642	N	GLY	A	215	3.090	33.592	31.036	1.00	18.68	N
5	ATOM	1643	CA	GLY	A	215	2.303	32.450	31.353	1.00	17.92	C
	ATOM	1644	C	GLY	A	215	2.783	31.206	30.594	1.00	17.40	C
	ATOM	1645	O	GLY	A	215	3.971	30.919	30.664	1.00	16.91	O
	ATOM	1646	N	PHE	A	216	1.819	30.432	30.117	1.00	15.76	N
	ATOM	1647	CA	PHE	A	216	2.091	29.062	29.685	1.00	15.22	C
10	ATOM	1648	C	PHE	A	216	1.536	28.700	28.315	1.00	21.72	C
	ATOM	1649	O	PHE	A	216	0.615	29.393	27.889	1.00	16.93	O
	ATOM	1650	CB	PHE	A	216	1.454	28.052	30.706	1.00	17.19	C
	ATOM	1651	CG	PHE	A	216	1.805	28.479	32.128	1.00	18.17	C
	ATOM	1652	CD1	PHE	A	216	3.078	28.261	32.605	1.00	18.71	C
15	ATOM	1653	CD2	PHE	A	216	0.880	29.187	32.900	1.00	15.71	C
	ATOM	1654	CE1	PHE	A	216	3.463	28.695	33.864	1.00	22.37	C
	ATOM	1655	CE2	PHE	A	216	1.266	29.606	34.157	1.00	19.25	C
	ATOM	1656	CZ	PHE	A	216	2.536	29.379	34.638	1.00	19.49	C
	ATOM	1657	N	SER	A	217	2.008	27.589	27.734	1.00	15.56	N
20	ATOM	1658	CA	SER	A	217	1.369	27.131	26.496	1.00	17.02	C
	ATOM	1659	C	SER	A	217	0.904	25.698	26.741	1.00	14.93	C
	ATOM	1660	O	SER	A	217	1.472	25.017	27.598	1.00	15.08	O
	ATOM	1661	CB	SER	A	217	2.312	27.206	25.291	1.00	21.00	C
	ATOM	1662	OG	SER	A	217	3.536	26.478	25.506	1.00	14.08	O
25	ATOM	1663	N	SER	A	218	-0.111	25.257	25.994	1.00	12.72	N
	ATOM	1664	CA	SER	A	218	-0.578	23.873	26.150	1.00	13.00	C
	ATOM	1665	C	SER	A	218	-1.173	23.379	24.842	1.00	13.14	C
	ATOM	1666	O	SER	A	218	-1.507	24.158	23.945	1.00	13.35	O
	ATOM	1667	CB	SER	A	218	-1.578	23.773	27.295	1.00	20.14	C
30	ATOM	1668	OG A	SER	A	218	-2.810	24.361	26.895	0.50	14.84	O
	ATOM	1669	OG B	SER	A	218	-2.018	22.467	27.590	0.50	17.53	O
	ATOM	1670	N	ASN	A	219	-1.256	22.045	24.761	1.00	13.03	N
	ATOM	1671	CA	ASN	A	219	-1.784	21.338	23.606	1.00	11.66	C
	ATOM	1672	C	ASN	A	219	-0.866	21.452	22.392	1.00	14.11	C
35	ATOM	1673	O	ASN	A	219	-1.353	21.126	21.273	1.00	14.12	O
	ATOM	1674	CB	ASN	A	219	-3.201	21.817	23.223	1.00	14.10	C
	ATOM	1675	CG	ASN	A	219	-4.080	20.725	22.613	1.00	17.99	C
	ATOM	1676	OD1	ASN	A	219	-4.037	19.626	23.166	1.00	15.33	O
	ATOM	1677	ND2	ASN	A	219	-4.815	21.094	21.565	1.00	17.07	N
40	ATOM	1678	N	VAL	A	220	0.368	21.934	22.552	1.00	13.71	N
	ATOM	1679	CA	VAL	A	220	1.247	22.075	21.386	1.00	11.95	C
	ATOM	1680	C	VAL	A	220	1.538	20.682	20.846	1.00	13.76	C
	ATOM	1681	O	VAL	A	220	1.934	19.740	21.510	1.00	13.52	O
	ATOM	1682	CB	VAL	A	220	2.556	22.805	21.735	1.00	10.00	C
45	ATOM	1683	CG1	VAL	A	220	3.448	22.783	20.485	1.00	13.46	C
	ATOM	1684	CG2	VAL	A	220	2.220	24.204	22.233	1.00	14.70	C
	ATOM	1685	N	SER	A	221	1.255	20.499	19.559	1.00	11.96	N
	ATOM	1686	CA	SER	A	221	1.341	19.261	18.833	1.00	14.66	C
	ATOM	1687	C	SER	A	221	0.313	18.231	19.263	1.00	12.51	C
50	ATOM	1688	O	SER	A	221	0.439	17.128	18.744	1.00	16.81	O
	ATOM	1689	CB	SER	A	221	2.723	18.593	18.901	1.00	14.72	C
	ATOM	1690	OG	SER	A	221	3.724	19.605	18.684	1.00	12.62	O
	ATOM	1691	N	ASN	A	222	-0.631	18.601	20.110	1.00	13.47	N
	ATOM	1692	CA	ASN	A	222	-1.625	17.642	20.572	1.00	14.48	C
55	ATOM	1693	C	ASN	A	222	-2.925	17.979	19.829	1.00	12.73	C
	ATOM	1694	O	ASN	A	222	-2.928	18.650	18.818	1.00	13.89	O
	ATOM	1695	CB	ASN	A	222	-1.770	17.526	22.086	1.00	13.91	C
	ATOM	1696	CG	ASN	A	222	-2.016	16.103	22.503	1.00	19.90	C
	ATOM	1697	OD1	ASN	A	222	-3.127	15.605	22.333	1.00	19.28	O

	ATOM	1698	ND2	ASN	A	222	-1.003	15.406	23.038	1.00	18.83	N
	ATOM	1699	N	TYR	A	223	-3.966	17.275	20.257	1.00	13.32	N
	ATOM	1700	CA	TYR	A	223	-5.237	17.270	19.551	1.00	11.77	C
	ATOM	1701	C	TYR	A	223	-6.437	17.515	20.460	1.00	15.77	C
5	ATOM	1702	O	TYR	A	223	-7.578	17.316	19.988	1.00	16.62	O
	ATOM	1703	CB	TYR	A	223	-5.372	15.864	18.943	1.00	15.06	C
	ATOM	1704	CG	TYR	A	223	-4.199	15.350	18.137	1.00	15.92	C
	ATOM	1705	CD1	TYR	A	223	-3.132	14.677	18.750	1.00	15.93	C
	ATOM	1706	CD2	TYR	A	223	-4.146	15.572	16.762	1.00	16.14	C
10	ATOM	1707	CE1	TYR	A	223	-2.060	14.243	17.988	1.00	15.58	C
	ATOM	1708	CE2	TYR	A	223	-3.077	15.117	15.999	1.00	17.85	C
	ATOM	1709	CZ	TYR	A	223	-2.047	14.465	16.639	1.00	16.41	C
	ATOM	1710	OH	TYR	A	223	-0.997	13.959	15.898	1.00	19.26	O
	ATOM	1711	N	ASN	A	224	-6.198	17.896	21.713	1.00	13.31	N
15	ATOM	1712	CA	ASN	A	224	-7.316	18.118	22.631	1.00	14.52	C
	ATOM	1713	C	ASN	A	224	-8.139	19.326	22.186	1.00	16.01	C
	ATOM	1714	O	ASN	A	224	-7.654	20.246	21.549	1.00	16.80	O
	ATOM	1715	CB	ASN	A	224	-6.786	18.372	24.027	1.00	13.57	C
	ATOM	1716	CG	ASN	A	224	-5.958	17.284	24.658	1.00	12.50	C
20	ATOM	1717	OD1	ASN	A	224	-6.099	16.139	24.245	1.00	19.32	O
	ATOM	1718	ND2	ASN	A	224	-5.140	17.615	25.660	1.00	16.34	N
	ATOM	1719	N	PRO	A	225	-9.451	19.241	22.399	1.00	17.76	N
	ATOM	1720	CA	PRO	A	225	-10.332	20.344	22.059	1.00	14.38	C
	ATOM	1721	C	PRO	A	225	-10.173	21.441	23.092	1.00	18.93	C
25	ATOM	1722	O	PRO	A	225	-9.865	21.169	24.250	1.00	16.45	O
	ATOM	1723	CB	PRO	A	225	-11.751	19.727	22.146	1.00	17.67	C
	ATOM	1724	CG	PRO	A	225	-11.529	18.670	23.188	1.00	20.92	C
	ATOM	1725	CD	PRO	A	225	-10.084	18.178	23.153	1.00	17.10	C
	ATOM	1726	N	TYR	A	226	-10.328	22.677	22.638	1.00	21.84	N
30	ATOM	1727	CA	TYR	A	226	-10.285	23.838	23.506	1.00	18.19	C
	ATOM	1728	C	TYR	A	226	-11.472	23.772	24.472	1.00	19.97	C
	ATOM	1729	O	TYR	A	226	-11.307	23.726	25.676	1.00	21.67	O
	ATOM	1730	CB	TYR	A	226	-10.317	25.144	22.709	1.00	14.39	C
	ATOM	1731	CG	TYR	A	226	-10.388	26.355	23.619	1.00	17.51	C
35	ATOM	1732	CD1	TYR	A	226	-9.335	26.691	24.448	1.00	21.80	C
	ATOM	1733	CD2	TYR	A	226	-11.509	27.164	23.645	1.00	22.13	C
	ATOM	1734	CE1	TYR	A	226	-9.367	27.780	25.297	1.00	25.82	C
	ATOM	1735	CE2	TYR	A	226	-11.561	28.263	24.486	1.00	24.30	C
	ATOM	1736	CZ	TYR	A	226	-10.503	28.573	25.303	1.00	23.10	C
40	ATOM	1737	OH	TYR	A	226	-10.543	29.646	26.149	1.00	26.30	O
	ATOM	1738	N	SER	A	227	-12.699	23.702	23.944	1.00	23.66	N
	ATOM	1739	CA	SER	A	227	-13.857	23.741	24.842	1.00	24.42	C
	ATOM	1740	C	SER	A	227	-14.978	22.828	24.340	1.00	23.09	C
	ATOM	1741	O	SER	A	227	-15.376	23.033	23.193	1.00	29.17	O
45	ATOM	1742	CB	SER	A	227	-14.383	25.186	24.890	1.00	25.47	C
	ATOM	1743	OG	SER	A	227	-15.470	25.316	25.798	1.00	37.46	O
	ATOM	1744	N	THR	A	228	-15.357	21.875	25.167	1.00	27.13	N
	ATOM	1745	CA	THR	A	228	-16.464	21.001	24.769	1.00	28.02	C
	ATOM	1746	C	THR	A	228	-17.186	20.456	25.988	1.00	23.08	C
50	ATOM	1747	O	THR	A	228	-16.696	20.174	27.071	1.00	27.84	O
	ATOM	1748	CB	THR	A	228	-16.068	19.880	23.804	1.00	33.27	C
	ATOM	1749	OG1	THR	A	228	-17.198	18.986	23.652	1.00	35.88	O
	ATOM	1750	CG2	THR	A	228	-14.932	19.033	24.316	1.00	25.38	C
	ATOM	1751	N	SER	A	229	-18.506	20.266	25.777	1.00	29.62	N
55	ATOM	1752	CA	SER	A	229	-19.376	19.714	26.794	1.00	24.79	C
	ATOM	1753	C	SER	A	229	-19.466	18.198	26.648	1.00	30.28	C
	ATOM	1754	O	SER	A	229	-20.122	17.514	27.430	1.00	31.44	O
	ATOM	1755	CB	SER	A	229	-20.804	20.261	26.747	1.00	29.37	C
	ATOM	1756	OG	SER	A	229	-21.203	20.465	25.408	1.00	39.50	O

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      ATOM  1757  N    ASN A 230   -18.810  17.654  25.621  1.00  25.35          N
      ATOM  1758  CA   ASN A 230   -18.765  16.231  25.359  1.00  32.28          C
      ATOM  1759  C    ASN A 230   -17.358  15.680  25.188  1.00  30.97          C
      ATOM  1760  O    ASN A 230   -16.998  15.188  24.113  1.00  30.41          O
   5  ATOM  1761  CB   ASN A 230   -19.544  15.958  24.037  1.00  32.54          C
      ATOM  1762  CG   ASN A 230   -20.620  16.961  23.684  1.00  43.39          C
      ATOM  1763  OD1  ASN A 230   -21.700  16.950  24.292  1.00  34.12          O
      ATOM  1764  ND2  ASN A 230   -20.364  17.870  22.742  1.00  41.60          N
      ATOM  1765  N    PRO A 231   -16.512  15.734  26.199  1.00  25.90          N
  10  ATOM  1766  CA   PRO A 231   -15.149  15.229  26.098  1.00  27.71          C
      ATOM  1767  C    PRO A 231   -15.155  13.714  26.028  1.00  30.87          C
      ATOM  1768  O    PRO A 231   -16.009  12.988  26.547  1.00  30.76          O
      ATOM  1769  CB   PRO A 231   -14.382  15.655  27.361  1.00  24.52          C
      ATOM  1770  CG   PRO A 231   -15.543  15.819  28.321  1.00  30.64          C
  15  ATOM  1771  CD   PRO A 231   -16.762  16.264  27.541  1.00  27.64          C
      ATOM  1772  N    PRO A 232   -14.125  13.202  25.384  1.00  30.58          N
      ATOM  1773  CA   PRO A 232   -13.915  11.771  25.232  1.00  29.59          C
      ATOM  1774  C    PRO A 232   -13.958  11.072  26.562  1.00  24.88          C
      ATOM  1775  O    PRO A 232   -13.516  11.585  27.600  1.00  26.56          O
  20  ATOM  1776  CB   PRO A 232   -12.484  11.657  24.628  1.00  30.65          C
      ATOM  1777  CG   PRO A 232   -12.437  12.951  23.845  1.00  27.71          C
      ATOM  1778  CD   PRO A 232   -13.073  14.007  24.739  1.00  33.43          C
      ATOM  1779  N    PRO A 233   -14.455   9.840  26.595  1.00  31.50          N
      ATOM  1780  CA   PRO A 233   -14.537   8.982  27.755  1.00  30.02          C
  25  ATOM  1781  C    PRO A 233   -13.271   8.784  28.549  1.00  31.77          C
      ATOM  1782  O    PRO A 233   -13.309   8.664  29.766  1.00  36.82          O
      ATOM  1783  CB   PRO A 233   -14.946   7.570  27.272  1.00  33.21          C
      ATOM  1784  CG   PRO A 233   -15.369   7.806  25.859  1.00  35.54          C
      ATOM  1785  CD   PRO A 233   -14.998   9.195  25.395  1.00  31.97          C
  30  ATOM  1786  N    TYR A 234   -12.109   8.784  27.890  1.00  31.90          N
      ATOM  1787  CA   TYR A 234   -10.829   8.611  28.542  1.00  29.83          C
      ATOM  1788  C    TYR A 234   -10.450   9.783  29.436  1.00  25.38          C
      ATOM  1789  O    TYR A 234    -9.515   9.662  30.251  1.00  31.82          O
      ATOM  1790  CB   TYR A 234    -9.798   8.250  27.477  1.00  30.08          C
  35  ATOM  1791  CG   TYR A 234    -9.519   9.265  26.400  1.00  28.08          C
      ATOM  1792  CD1  TYR A 234    -9.099  10.543  26.733  1.00  26.39          C
      ATOM  1793  CD2  TYR A 234    -9.635   8.948  25.056  1.00  25.60          C
      ATOM  1794  CE1  TYR A 234    -8.811  11.452  25.745  1.00  20.54          C
      ATOM  1795  CE2  TYR A 234    -9.363   9.872  24.060  1.00  27.19          C
  40  ATOM  1796  CZ   TYR A 234    -8.934  11.124  24.427  1.00  21.27          C
      ATOM  1797  OH   TYR A 234    -8.645  12.095  23.490  1.00  26.71          O
      ATOM  1798  N    THR A 235   -11.182  10.888  29.339  1.00  22.74          N
      ATOM  1799  CA   THR A 235   -10.999  12.048  30.204  1.00  25.50          C
      ATOM  1800  C    THR A 235   -11.837  11.912  31.486  1.00  26.78          C
  45  ATOM  1801  O    THR A 235   -11.832  12.804  32.346  1.00  32.19          O
      ATOM  1802  CB   THR A 235   -11.370  13.374  29.533  1.00  28.11          C
      ATOM  1803  OG1  THR A 235   -12.800  13.416  29.380  1.00  24.65          O
      ATOM  1804  CG2  THR A 235   -10.745  13.554  28.158  1.00  28.48          C
      ATOM  1805  N    SER A 236   -12.535  10.793  31.673  1.00  31.61          N
  50  ATOM  1806  CA   SER A 236   -13.313  10.558  32.886  1.00  31.99          C
      ATOM  1807  C    SER A 236   -12.412  10.540  34.115  1.00  32.80          C
      ATOM  1808  O    SER A 236   -11.325   9.955  34.100  1.00  36.29          O
      ATOM  1809  CB   SER A 236   -14.079   9.222  32.787  1.00  35.41          C
      ATOM  1810  OG   SER A 236   -15.443   9.535  32.572  1.00  42.20          O
  55  ATOM  1811  N    GLY A 237   -12.805  11.299  35.139  1.00  34.05          N
      ATOM  1812  CA   GLY A 237   -12.009  11.406  36.358  1.00  38.66          C
      ATOM  1813  C    GLY A 237   -11.021  12.566  36.291  1.00  32.49          C
      ATOM  1814  O    GLY A 237   -10.372  12.866  37.294  1.00  36.66          O
      ATOM  1815  N    SER A 238   -10.896  13.223  35.135  1.00  29.05          N
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	ATOM	1816	CA	SER	A	238	-9.947	14.337	35.082	1.00	24.29	C
	ATOM	1817	C	SER	A	238	-10.699	15.634	35.256	1.00	20.53	C
	ATOM	1818	O	SER	A	238	-11.716	15.841	34.600	1.00	24.25	O
	ATOM	1819	CB	SER	A	238	-9.226	14.413	33.733	1.00	32.02	C
5	ATOM	1820	OG	SER	A	238	-8.667	15.717	33.584	1.00	28.04	O
	ATOM	1821	N	PRO	A	239	-10.147	16.536	36.060	1.00	21.54	N
	ATOM	1822	CA	PRO	A	239	-10.693	17.874	36.238	1.00	18.57	C
	ATOM	1823	C	PRO	A	239	-10.376	18.806	35.075	1.00	22.82	C
	ATOM	1824	O	PRO	A	239	-10.899	19.905	34.875	1.00	23.72	O
10	ATOM	1825	CB	PRO	A	239	-9.979	18.447	37.486	1.00	24.85	C
	ATOM	1826	CG	PRO	A	239	-8.670	17.715	37.418	1.00	23.95	C
	ATOM	1827	CD	PRO	A	239	-8.920	16.341	36.812	1.00	25.04	C
	ATOM	1828	N	SER	A	240	-9.561	18.346	34.115	1.00	22.32	N
	ATOM	1829	CA	SER	A	240	-9.129	19.075	32.956	1.00	25.70	C
15	ATOM	1830	C	SER	A	240	-9.406	18.372	31.642	1.00	22.46	C
	ATOM	1831	O	SER	A	240	-8.481	18.072	30.889	1.00	24.11	O
	ATOM	1832	CB	SER	A	240	-7.579	19.154	33.074	1.00	19.12	C
	ATOM	1833	OG	SER	A	240	-7.242	19.930	34.207	1.00	22.92	O
	ATOM	1834	N	PRO	A	241	-10.652	18.085	31.336	1.00	21.89	N
20	ATOM	1835	CA	PRO	A	241	-11.085	17.366	30.160	1.00	20.08	C
	ATOM	1836	C	PRO	A	241	-11.108	18.113	28.853	1.00	23.99	C
	ATOM	1837	O	PRO	A	241	-11.345	17.491	27.815	1.00	23.82	O
	ATOM	1838	CB	PRO	A	241	-12.477	16.775	30.512	1.00	26.26	C
	ATOM	1839	CG	PRO	A	241	-12.979	17.963	31.310	1.00	21.14	C
25	ATOM	1840	CD	PRO	A	241	-11.825	18.433	32.163	1.00	21.90	C
	ATOM	1841	N	ASP	A	242	-10.811	19.404	28.878	1.00	22.81	N
	ATOM	1842	CA	ASP	A	242	-10.580	20.180	27.666	1.00	17.96	C
	ATOM	1843	C	ASP	A	242	-9.522	21.207	28.055	1.00	19.55	C
	ATOM	1844	O	ASP	A	242	-9.178	21.283	29.260	1.00	16.73	O
30	ATOM	1845	CB	ASP	A	242	-11.824	20.722	27.010	1.00	25.88	C
	ATOM	1846	CG	ASP	A	242	-12.649	21.633	27.872	1.00	24.73	C
	ATOM	1847	OD1	ASP	A	242	-12.110	22.106	28.890	1.00	20.38	O
	ATOM	1848	OD2	ASP	A	242	-13.832	21.863	27.532	1.00	26.06	O
	ATOM	1849	N	GLU	A	243	-8.916	21.840	27.055	1.00	20.71	N
35	ATOM	1850	CA	GLU	A	243	-7.813	22.756	27.320	1.00	19.80	C
	ATOM	1851	C	GLU	A	243	-8.245	24.021	28.020	1.00	19.53	C
	ATOM	1852	O	GLU	A	243	-7.470	24.598	28.787	1.00	17.45	O
	ATOM	1853	CB	GLU	A	243	-7.031	22.968	26.025	1.00	15.20	C
	ATOM	1854	CG	GLU	A	243	-6.412	21.632	25.576	1.00	17.65	C
40	ATOM	1855	CD	GLU	A	243	-5.270	21.219	26.502	1.00	14.78	C
	ATOM	1856	OE1	GLU	A	243	-4.317	22.022	26.567	1.00	20.61	O
	ATOM	1857	OE2	GLU	A	243	-5.348	20.190	27.177	1.00	18.25	O
	ATOM	1858	N	SER	A	244	-9.484	24.464	27.770	1.00	20.35	N
	ATOM	1859	CA	SER	A	244	-9.996	25.633	28.480	1.00	19.44	C
45	ATOM	1860	C	SER	A	244	-10.046	25.291	29.966	1.00	16.46	C
	ATOM	1861	O	SER	A	244	-9.606	26.134	30.752	1.00	22.95	O
	ATOM	1862	CB	SER	A	244	-11.385	26.024	27.985	1.00	20.18	C
	ATOM	1863	OG	SER	A	244	-11.832	27.143	28.763	1.00	25.46	O
	ATOM	1864	N	ARG	A	245	-10.522	24.105	30.367	1.00	20.70	N
50	ATOM	1865	CA	ARG	A	245	-10.553	23.804	31.798	1.00	22.33	C
	ATOM	1866	C	ARG	A	245	-9.157	23.507	32.329	1.00	21.53	C
	ATOM	1867	O	ARG	A	245	-8.808	23.825	33.464	1.00	21.46	O
	ATOM	1868	CB	ARG	A	245	-11.549	22.720	32.174	1.00	23.77	C
	ATOM	1869	CG	ARG	A	245	-12.974	23.320	32.084	1.00	19.77	C
55	ATOM	1870	CD	ARG	A	245	-13.958	22.164	32.185	1.00	27.37	C
	ATOM	1871	NE	ARG	A	245	-14.218	21.591	30.852	1.00	25.15	N
	ATOM	1872	CZ	ARG	A	245	-15.082	20.586	30.707	1.00	28.20	C
	ATOM	1873	NH1	ARG	A	245	-15.666	20.094	31.806	1.00	31.28	N
	ATOM	1874	NH2	ARG	A	245	-15.348	20.084	29.516	1.00	21.61	N

	ATOM	1875	N	TYR	A	246	-8.275	22.976	31.464	1.00	23.79	N
	ATOM	1876	CA	TYR	A	246	-6.892	22.755	31.942	1.00	19.09	C
	ATOM	1877	C	TYR	A	246	-6.250	24.092	32.303	1.00	21.17	C
	ATOM	1878	O	TYR	A	246	-5.656	24.186	33.382	1.00	22.27	O
5	ATOM	1879	CB	TYR	A	246	-6.082	22.025	30.869	1.00	16.61	C
	ATOM	1880	CG	TYR	A	246	-4.621	21.807	31.233	1.00	19.40	C
	ATOM	1881	CD1	TYR	A	246	-4.232	21.257	32.435	1.00	19.75	C
	ATOM	1882	CD2	TYR	A	246	-3.624	22.129	30.323	1.00	22.69	C
	ATOM	1883	CE1	TYR	A	246	-2.898	21.061	32.772	1.00	21.82	C
10	ATOM	1884	CE2	TYR	A	246	-2.289	21.944	30.627	1.00	25.37	C
	ATOM	1885	CZ	TYR	A	246	-1.934	21.391	31.846	1.00	21.41	C
	ATOM	1886	OH	TYR	A	246	-0.611	21.235	32.182	1.00	17.17	O
	ATOM	1887	N	ALA	A	247	-6.413	25.097	31.433	1.00	18.27	N
	ATOM	1888	CA	ALA	A	247	-5.867	26.435	31.638	1.00	21.58	C
15	ATOM	1889	C	ALA	A	247	-6.361	27.056	32.938	1.00	19.91	C
	ATOM	1890	O	ALA	A	247	-5.583	27.602	33.725	1.00	21.76	O
	ATOM	1891	CB	ALA	A	247	-6.144	27.352	30.452	1.00	17.25	C
	ATOM	1892	N	THR	A	248	-7.674	26.975	33.196	1.00	22.30	N
	ATOM	1893	CA	THR	A	248	-8.206	27.498	34.468	1.00	24.66	C
20	ATOM	1894	C	THR	A	248	-7.660	26.776	35.686	1.00	22.02	C
	ATOM	1895	O	THR	A	248	-7.340	27.412	36.700	1.00	29.44	O
	ATOM	1896	CB	THR	A	248	-9.756	27.436	34.447	1.00	27.51	C
	ATOM	1897	OG1	THR	A	248	-10.192	28.341	33.436	1.00	27.39	O
	ATOM	1898	CG2	THR	A	248	-10.344	27.815	35.808	1.00	29.59	C
25	ATOM	1899	N	ASN	A	249	-7.441	25.465	35.641	1.00	19.27	N
	ATOM	1900	CA	ASN	A	249	-6.982	24.661	36.752	1.00	17.79	C
	ATOM	1901	C	ASN	A	249	-5.527	25.000	37.068	1.00	22.81	C
	ATOM	1902	O	ASN	A	249	-5.180	25.165	38.229	1.00	22.30	O
	ATOM	1903	CB	ASN	A	249	-7.149	23.183	36.454	1.00	22.00	C
30	ATOM	1904	CG	ASN	A	249	-8.610	22.748	36.490	1.00	25.24	C
	ATOM	1905	OD1	ASN	A	249	-9.465	23.408	37.106	1.00	28.91	O
	ATOM	1906	ND2	ASN	A	249	-8.881	21.640	35.820	1.00	23.15	N
	ATOM	1907	N	ILE	A	250	-4.716	25.086	35.998	1.00	20.27	N
	ATOM	1908	CA	ILE	A	250	-3.330	25.480	36.216	1.00	23.25	C
35	ATOM	1909	C	ILE	A	250	-3.315	26.925	36.706	1.00	22.66	C
	ATOM	1910	O	ILE	A	250	-2.639	27.222	37.696	1.00	27.25	O
	ATOM	1911	CB	ILE	A	250	-2.420	25.320	34.977	1.00	17.89	C
	ATOM	1912	CG1	ILE	A	250	-2.194	23.851	34.643	1.00	21.31	C
	ATOM	1913	CG2	ILE	A	250	-1.090	26.048	35.232	1.00	20.72	C
40	ATOM	1914	CD1	ILE	A	250	-1.316	23.045	35.577	1.00	25.73	C
	ATOM	1915	N	ALA	A	251	-4.088	27.817	36.066	1.00	20.78	N
	ATOM	1916	CA	ALA	A	251	-4.077	29.231	36.474	1.00	21.60	C
	ATOM	1917	C	ALA	A	251	-4.486	29.407	37.933	1.00	19.92	C
	ATOM	1918	O	ALA	A	251	-3.871	30.204	38.636	1.00	23.77	O
45	ATOM	1919	CB	ALA	A	251	-4.989	30.018	35.540	1.00	24.91	C
	ATOM	1920	N	ASN	A	252	-5.412	28.586	38.413	1.00	21.91	N
	ATOM	1921	CA	ASN	A	252	-5.826	28.633	39.826	1.00	27.37	C
	ATOM	1922	C	ASN	A	252	-4.738	28.168	40.782	1.00	26.91	C
	ATOM	1923	O	ASN	A	252	-4.485	28.787	41.835	1.00	30.43	O
50	ATOM	1924	CB	ASN	A	252	-7.124	27.817	39.959	1.00	29.77	C
	ATOM	1925	CG	ASN	A	252	-8.329	28.501	39.340	1.00	34.19	C
	ATOM	1926	OD1	ASN	A	252	-8.275	29.635	38.845	1.00	41.35	O
	ATOM	1927	ND2	ASN	A	252	-9.494	27.860	39.294	1.00	33.75	N
	ATOM	1928	N	ALA	A	253	-3.983	27.119	40.433	1.00	22.42	N
55	ATOM	1929	CA	ALA	A	253	-2.875	26.607	41.200	1.00	23.09	C
	ATOM	1930	C	ALA	A	253	-1.754	27.646	41.233	1.00	23.39	C
	ATOM	1931	O	ALA	A	253	-1.161	27.852	42.291	1.00	29.01	O
	ATOM	1932	CB	ALA	A	253	-2.317	25.300	40.661	1.00	30.28	C
	ATOM	1933	N	MET	A	254	-1.457	28.282	40.105	1.00	22.12	N

	ATOM	1934	CA	MET	A	254	-0.429	29.305	40.049	1.00 23.50	C
	ATOM	1935	C	MET	A	254	-0.745	30.535	40.880	1.00 26.16	C
	ATOM	1936	O	MET	A	254	0.113	31.148	41.503	1.00 26.18	O
	ATOM	1937	CB	MET	A	254	-0.216	29.745	38.587	1.00 23.03	C
5	ATOM	1938	CG	MET	A	254	0.259	28.577	37.730	1.00 18.94	C
	ATOM	1939	SD	MET	A	254	1.967	28.036	38.050	1.00 21.24	S
	ATOM	1940	CE	MET	A	254	1.983	26.637	36.907	1.00 25.64	C
	ATOM	1941	N	ARG	A	255	-1.996	30.967	40.779	1.00 22.68	N
	ATOM	1942	CA	ARG	A	255	-2.490	32.151	41.472	1.00 26.36	C
10	ATOM	1943	C	ARG	A	255	-2.288	32.106	42.969	1.00 21.34	C
	ATOM	1944	O	ARG	A	255	-1.853	33.058	43.616	1.00 32.51	O
	ATOM	1945	CB	ARG	A	255	-3.986	32.236	41.116	1.00 27.08	C
	ATOM	1946	CG	ARG	A	255	-4.696	33.315	41.916	1.00 35.35	C
	ATOM	1947	CD	ARG	A	255	-6.087	33.527	41.365	1.00 29.58	C
15	ATOM	1948	NE	ARG	A	255	-6.065	33.882	39.948	1.00 28.85	N
	ATOM	1949	CZ	ARG	A	255	-6.582	33.147	38.982	1.00 21.00	C
	ATOM	1950	NH1	ARG	A	255	-7.137	31.971	39.273	1.00 32.44	N
	ATOM	1951	NH2	ARG	A	255	-6.545	33.507	37.716	1.00 24.26	N
	ATOM	1952	N	GLN	A	256	-2.543	30.948	43.577	1.00 27.23	N
20	ATOM	1953	CA	GLN	A	256	-2.399	30.658	44.976	1.00 27.13	C
	ATOM	1954	C	GLN	A	256	-0.947	30.638	45.438	1.00 29.65	C
	ATOM	1955	O	GLN	A	256	-0.659	30.653	46.641	1.00 31.23	O
	ATOM	1956	CB	GLN	A	256	-2.983	29.281	45.317	1.00 30.48	C
	ATOM	1957	CG	GLN	A	256	-4.478	29.257	45.517	1.00 30.07	C
25	ATOM	1958	CD	GLN	A	256	-4.987	30.523	46.192	1.00 40.42	C
	ATOM	1959	OE1	GLN	A	256	-5.818	31.222	45.622	1.00 34.76	O
	ATOM	1960	NE2	GLN	A	256	-4.437	30.833	47.356	1.00 41.99	N
	ATOM	1961	N	ARG	A	257	-0.022	30.525	44.486	1.00 24.01	N
	ATOM	1962	CA	ARG	A	257	1.399	30.535	44.797	1.00 21.55	C
30	ATOM	1963	C	ARG	A	257	1.976	31.875	44.337	1.00 24.24	C
	ATOM	1964	O	ARG	A	257	3.175	32.158	44.345	1.00 31.12	O
	ATOM	1965	CB	ARG	A	257	2.156	29.371	44.178	1.00 29.04	C
	ATOM	1966	CG	ARG	A	257	1.677	27.967	44.546	1.00 27.64	C
	ATOM	1967	CD	ARG	A	257	2.263	26.993	43.527	1.00 23.53	C
35	ATOM	1968	NE	ARG	A	257	2.195	25.596	43.873	1.00 30.09	N
	ATOM	1969	CZ	ARG	A	257	3.188	24.804	44.274	1.00 22.17	C
	ATOM	1970	NH1	ARG	A	257	4.418	25.245	44.470	1.00 27.53	N
	ATOM	1971	NH2	ARG	A	257	2.890	23.529	44.500	1.00 28.30	N
	ATOM	1972	N	GLY	A	258	1.088	32.724	43.827	1.00 24.82	N
40	ATOM	1973	CA	GLY	A	258	1.376	34.040	43.296	1.00 20.44	C
	ATOM	1974	C	GLY	A	258	2.242	34.116	42.049	1.00 30.44	C
	ATOM	1975	O	GLY	A	258	3.100	34.974	41.844	1.00 26.62	O
	ATOM	1976	N	LEU	A	259	2.070	33.157	41.158	1.00 25.18	N
	ATOM	1977	CA	LEU	A	259	2.848	33.060	39.909	1.00 25.26	C
45	ATOM	1978	C	LEU	A	259	1.925	33.380	38.754	1.00 25.85	C
	ATOM	1979	O	LEU	A	259	0.705	33.474	38.968	1.00 26.59	O
	ATOM	1980	CB	LEU	A	259	3.303	31.605	39.791	1.00 24.85	C
	ATOM	1981	CG	LEU	A	259	4.215	31.028	40.875	1.00 30.31	C
	ATOM	1982	CD1	LEU	A	259	4.334	29.521	40.738	1.00 28.83	C
50	ATOM	1983	CD2	LEU	A	259	5.599	31.661	40.841	1.00 30.15	C
	ATOM	1984	N	PRO	A	260	2.446	33.585	37.561	1.00 27.65	N
	ATOM	1985	CA	PRO	A	260	1.709	33.887	36.355	1.00 25.68	C
	ATOM	1986	C	PRO	A	260	0.651	32.844	36.038	1.00 20.39	C
	ATOM	1987	O	PRO	A	260	0.699	31.709	36.479	1.00 23.63	O
55	ATOM	1988	CB	PRO	A	260	2.689	34.067	35.185	1.00 23.29	C
	ATOM	1989	CG	PRO	A	260	3.982	33.631	35.795	1.00 26.45	C
	ATOM	1990	CD	PRO	A	260	3.893	33.520	37.292	1.00 24.34	C
	ATOM	1991	N	THR	A	261	-0.376	33.287	35.321	1.00 19.28	N
	ATOM	1992	CA	THR	A	261	-1.538	32.450	35.042	1.00 19.40	C

	ATOM	1993	C	THR	A	261	-1.965	32.285	33.592	1.00	23.58	C
	ATOM	1994	O	THR	A	261	-2.832	31.429	33.354	1.00	24.45	O
	ATOM	1995	CB	THR	A	261	-2.753	33.182	35.712	1.00	26.00	C
	ATOM	1996	OG1	THR	A	261	-2.798	34.536	35.252	1.00	25.75	O
5	ATOM	1997	CG2	THR	A	261	-2.633	33.186	37.226	1.00	27.44	C
	ATOM	1998	N	GLN	A	262	-1.499	33.063	32.650	1.00	19.65	N
	ATOM	1999	CA	GLN	A	262	-2.055	33.188	31.321	1.00	22.46	C
	ATOM	2000	C	GLN	A	262	-1.636	32.146	30.292	1.00	24.66	C
	ATOM	2001	O	GLN	A	262	-0.461	31.868	30.203	1.00	26.22	O
10	ATOM	2002	CB	GLN	A	262	-1.812	34.585	30.741	1.00	22.70	C
	ATOM	2003	CG	GLN	A	262	-2.375	35.682	31.656	1.00	25.82	C
	ATOM	2004	CD	GLN	A	262	-3.876	35.523	31.891	1.00	23.40	C
	ATOM	2005	OE1	GLN	A	262	-4.287	35.179	32.987	1.00	23.21	O
	ATOM	2006	NE2	GLN	A	262	-4.698	35.735	30.875	1.00	23.57	N
15	ATOM	2007	N	PHE	A	263	-2.601	31.624	29.528	1.00	21.18	N
	ATOM	2008	CA	PHE	A	263	-2.275	30.568	28.570	1.00	19.80	C
	ATOM	2009	C	PHE	A	263	-2.409	30.984	27.113	1.00	18.97	C
	ATOM	2010	O	PHE	A	263	-3.201	31.833	26.749	1.00	17.16	O
	ATOM	2011	CB	PHE	A	263	-3.277	29.394	28.705	1.00	15.84	C
20	ATOM	2012	CG	PHE	A	263	-2.886	28.393	29.744	1.00	15.38	C
	ATOM	2013	CD1	PHE	A	263	-2.905	28.746	31.087	1.00	18.32	C
	ATOM	2014	CD2	PHE	A	263	-2.380	27.139	29.437	1.00	16.13	C
	ATOM	2015	CE1	PHE	A	263	-2.509	27.879	32.064	1.00	12.79	C
	ATOM	2016	CE2	PHE	A	263	-2.012	26.250	30.410	1.00	20.12	C
25	ATOM	2017	CZ	PHE	A	263	-2.051	26.597	31.761	1.00	16.90	C
	ATOM	2018	N	ILE	A	264	-1.691	30.285	26.236	1.00	14.08	N
	ATOM	2019	CA	ILE	A	264	-1.919	30.314	24.797	1.00	14.26	C
	ATOM	2020	C	ILE	A	264	-2.127	28.826	24.458	1.00	19.29	C
	ATOM	2021	O	ILE	A	264	-1.458	28.031	25.082	1.00	17.00	O
30	ATOM	2022	CB	ILE	A	264	-0.969	30.953	23.805	1.00	13.88	C
	ATOM	2023	CG1	ILE	A	264	0.462	30.428	24.019	1.00	12.80	C
	ATOM	2024	CG2	ILE	A	264	-1.024	32.472	24.010	1.00	15.27	C
	ATOM	2025	CD1	ILE	A	264	1.529	31.126	23.211	1.00	17.13	C
	ATOM	2026	N	ILE	A	265	-3.163	28.483	23.687	1.00	15.04	N
35	ATOM	2027	CA	ILE	A	265	-3.506	27.060	23.525	1.00	15.32	C
	ATOM	2028	C	ILE	A	265	-3.537	26.706	22.048	1.00	13.65	C
	ATOM	2029	O	ILE	A	265	-4.166	27.350	21.230	1.00	16.17	O
	ATOM	2030	CB	ILE	A	265	-4.918	26.746	24.070	1.00	15.48	C
	ATOM	2031	CG1	ILE	A	265	-4.898	26.920	25.592	1.00	18.66	C
40	ATOM	2032	CG2	ILE	A	265	-5.334	25.302	23.764	1.00	14.76	C
	ATOM	2033	CD1	ILE	A	265	-6.107	26.488	26.355	1.00	24.38	N
	ATOM	2034	N	ASP	A	266	-2.776	25.669	21.674	1.00	12.09	N
	ATOM	2035	CA	ASP	A	266	-2.667	25.279	20.269	1.00	10.33	C
	ATOM	2036	C	ASP	A	266	-3.993	24.615	19.867	1.00	15.37	C
45	ATOM	2037	O	ASP	A	266	-4.476	23.766	20.627	1.00	13.38	O
	ATOM	2038	CB	ASP	A	266	-1.580	24.192	20.143	1.00	13.35	C
	ATOM	2039	CG	ASP	A	266	-1.068	23.980	18.726	1.00	11.89	C
	ATOM	2040	OD1	ASP	A	266	-1.529	24.571	17.727	1.00	12.25	O
	ATOM	2041	OD2	ASP	A	266	-0.121	23.140	18.575	1.00	14.61	O
50	ATOM	2042	N	GLN	A	267	-4.526	25.013	18.716	1.00	13.05	N
	ATOM	2043	CA	GLN	A	267	-5.660	24.305	18.129	1.00	10.30	C
	ATOM	2044	C	GLN	A	267	-5.314	24.023	16.675	1.00	15.72	C
	ATOM	2045	O	GLN	A	267	-6.183	23.837	15.842	1.00	15.22	O
	ATOM	2046	CB	GLN	A	267	-7.003	25.069	18.183	1.00	16.05	C
55	ATOM	2047	CG	GLN	A	267	-7.580	25.206	19.587	1.00	13.66	C
	ATOM	2048	CD	GLN	A	267	-8.125	23.881	20.110	1.00	14.01	C
	ATOM	2049	OE1	GLN	A	267	-9.284	23.536	19.860	1.00	15.83	O
	ATOM	2050	NE2	GLN	A	267	-7.288	23.160	20.808	1.00	14.73	N
	ATOM	2051	N	SER	A	268	-3.998	23.871	16.360	1.00	15.92	N

	ATOM	2052	CA	SER	A	268	-3.594	23.553	14.991	1.00	13.57	C
	ATOM	2053	C	SER	A	268	-4.227	22.267	14.502	1.00	13.43	C
	ATOM	2054	O	SER	A	268	-4.570	22.147	13.318	1.00	12.19	O
	ATOM	2055	CB	SER	A	268	-2.061	23.394	14.919	1.00	12.06	C
5	ATOM	2056	OG	SER	A	268	-1.657	22.381	15.866	1.00	15.19	O
	ATOM	2057	N	ARG	A	269	-4.408	21.285	15.362	1.00	16.05	N
	ATOM	2058	CA	ARG	A	269	-5.049	20.016	14.997	1.00	10.93	C
	ATOM	2059	C	ARG	A	269	-5.955	19.613	16.157	1.00	14.16	C
	ATOM	2060	O	ARG	A	269	-5.548	19.739	17.306	1.00	13.60	O
10	ATOM	2061	CB	ARG	A	269	-4.000	18.897	14.846	1.00	13.90	C
	ATOM	2062	CG	ARG	A	269	-2.988	19.181	13.742	1.00	13.59	C
	ATOM	2063	CD	ARG	A	269	-1.989	18.057	13.516	1.00	16.30	C
	ATOM	2064	NE	ARG	A	269	-1.138	17.891	14.719	1.00	14.26	N
	ATOM	2065	CZ	ARG	A	269	-0.194	16.958	14.761	1.00	12.94	C
15	ATOM	2066	NH1	ARG	A	269	0.001	16.127	13.759	1.00	13.40	N
	ATOM	2067	NH2	ARG	A	269	0.565	16.830	15.870	1.00	16.04	N
	ATOM	2068	N	VAL	A	270	-7.193	19.217	15.883	1.00	14.90	N
	ATOM	2069	CA	VAL	A	270	-8.126	18.765	16.899	1.00	13.01	C
	ATOM	2070	C	VAL	A	270	-8.668	17.386	16.490	1.00	15.91	C
20	ATOM	2071	O	VAL	A	270	-9.160	17.241	15.379	1.00	15.04	O
	ATOM	2072	CB	VAL	A	270	-9.293	19.767	17.054	1.00	17.38	C
	ATOM	2073	CG1	VAL	A	270	-10.238	19.254	18.148	1.00	21.04	C
	ATOM	2074	CG2	VAL	A	270	-8.827	21.151	17.476	1.00	15.46	C
	ATOM	2075	N	ALA	A	271	-8.546	16.440	17.412	1.00	14.81	N
25	ATOM	2076	CA	ALA	A	271	-9.073	15.103	17.158	1.00	15.02	C
	ATOM	2077	C	ALA	A	271	-10.594	15.173	17.103	1.00	16.45	C
	ATOM	2078	O	ALA	A	271	-11.260	15.904	17.849	1.00	21.19	O
	ATOM	2079	CB	ALA	A	271	-8.642	14.204	18.318	1.00	16.61	C
	ATOM	2080	N	LEU	A	272	-11.140	14.389	16.187	1.00	16.83	N
30	ATOM	2081	CA	LEU	A	272	-12.567	14.231	16.006	1.00	23.67	C
	ATOM	2082	C	LEU	A	272	-12.964	12.969	16.771	1.00	24.17	C
	ATOM	2083	O	LEU	A	272	-12.119	12.262	17.350	1.00	23.04	O
	ATOM	2084	CB	LEU	A	272	-12.963	14.088	14.531	1.00	23.17	C
	ATOM	2085	CG	LEU	A	272	-12.250	15.054	13.566	1.00	29.20	C
35	ATOM	2086	CD1	LEU	A	272	-12.578	14.774	12.103	1.00	29.62	C
	ATOM	2087	CD2	LEU	A	272	-12.608	16.500	13.880	1.00	30.09	C
	ATOM	2088	N	SER	A	273	-14.280	12.749	16.779	1.00	31.07	N
	ATOM	2089	CA	SER	A	273	-14.843	11.633	17.524	1.00	27.11	C
	ATOM	2090	C	SER	A	273	-14.149	10.312	17.247	1.00	23.70	C
40	ATOM	2091	O	SER	A	273	-14.052	9.898	16.063	1.00	27.36	O
	ATOM	2092	CB	SER	A	273	-16.309	11.408	17.153	1.00	35.15	C
	ATOM	2093	OG	SER	A	273	-16.962	12.527	16.600	1.00	32.10	O
	ATOM	2094	N	GLY	A	274	-13.713	9.646	18.301	1.00	27.43	N
	ATOM	2095	CA	GLY	A	274	-13.117	8.330	18.179	1.00	28.98	C
45	ATOM	2096	C	GLY	A	274	-11.731	8.210	17.631	1.00	27.96	C
	ATOM	2097	O	GLY	A	274	-11.218	7.109	17.341	1.00	28.77	O
	ATOM	2098	N	ALA	A	275	-11.040	9.343	17.518	1.00	20.25	N
	ATOM	2099	CA	ALA	A	275	-9.692	9.284	16.938	1.00	21.95	C
	ATOM	2100	C	ALA	A	275	-8.718	8.598	17.867	1.00	24.84	C
50	ATOM	2101	O	ALA	A	275	-7.725	8.035	17.391	1.00	25.22	O
	ATOM	2102	CB	ALA	A	275	-9.210	10.672	16.549	1.00	20.57	C
	ATOM	2103	N	ARG	A	276	-8.910	8.700	19.177	1.00	24.15	N
	ATOM	2104	CA	ARG	A	276	-7.957	8.063	20.084	1.00	23.88	C
	ATOM	2105	C	ARG	A	276	-8.693	7.172	21.078	1.00	22.10	C
55	ATOM	2106	O	ARG	A	276	-9.749	7.584	21.514	1.00	24.86	O
	ATOM	2107	CB	ARG	A	276	-7.294	9.184	20.902	1.00	20.86	C
	ATOM	2108	CG	ARG	A	276	-6.299	9.993	20.078	1.00	21.98	C
	ATOM	2109	CD	ARG	A	276	-5.456	10.831	21.016	1.00	23.38	C
	ATOM	2110	NE	ARG	A	276	-6.148	12.055	21.395	1.00	20.58	N

	ATOM	2111	CZ	ARG A 276	−5.491	13.084	21.949	1.00	27.48	C
	ATOM	2112	NH1	ARG A 276	−4.191	12.993	22.186	1.00	20.08	N
	ATOM	2113	NH2	ARG A 276	−6.192	14.161	22.275	1.00	22.71	N
	ATOM	2114	N	SER A 277	−8.138	6.018	21.450	1.00	24.83	N
5	ATOM	2115	CA	SER A 277	−8.749	5.195	22.483	1.00	22.06	C
	ATOM	2116	C	SER A 277	−8.060	5.412	23.812	1.00	28.83	C
	ATOM	2117	O	SER A 277	−8.535	5.063	24.899	1.00	29.56	O
	ATOM	2118	CB	SER A 277	−8.679	3.712	22.061	1.00	30.69	C
	ATOM	2119	OG	SER A 277	−7.356	3.402	21.654	1.00	35.22	O
10	ATOM	2120	N	GLU A 278	−6.873	6.031	23.760	1.00	21.99	N
	ATOM	2121	CA	GLU A 278	−6.072	6.339	24.932	1.00	26.09	C
	ATOM	2122	C	GLU A 278	−5.646	7.803	24.818	1.00	21.55	C
	ATOM	2123	O	GLU A 278	−5.249	8.222	23.723	1.00	24.01	O
	ATOM	2124	CB	GLU A 278	−4.850	5.438	25.021	1.00	23.82	C
15	ATOM	2125	CG	GLU A 278	−5.051	3.956	24.784	1.00	40.17	C
	ATOM	2126	CD	GLU A 278	−4.851	3.092	26.010	1.00	52.25	C
	ATOM	2127	OE1	GLU A 278	−3.918	3.383	26.788	1.00	56.27	O
	ATOM	2128	OE2	GLU A 278	−5.618	2.118	26.202	1.00	64.20	O
	ATOM	2129	N	TRP A 279	−5.678	8.557	25.916	1.00	21.94	N
20	ATOM	2130	CA	TRP A 279	−5.350	9.979	25.821	1.00	16.41	C
	ATOM	2131	C	TRP A 279	−3.899	10.240	25.453	1.00	20.94	C
	ATOM	2132	O	TRP A 279	−3.578	11.239	24.820	1.00	21.93	O
	ATOM	2133	CB	TRP A 279	−5.636	10.659	27.154	1.00	20.36	C
	ATOM	2134	CG	TRP A 279	−5.958	12.125	27.086	1.00	20.26	C
25	ATOM	2135	CD1	TRP A 279	−5.807	13.006	26.054	1.00	23.25	C
	ATOM	2136	CD2	TRP A 279	−6.556	12.851	28.164	1.00	23.44	C
	ATOM	2137	NE1	TRP A 279	−6.270	14.240	26.432	1.00	22.30	N
	ATOM	2138	CE2	TRP A 279	−6.735	14.173	27.717	1.00	14.66	C
	ATOM	2139	CE3	TRP A 279	−6.953	12.507	29.466	1.00	21.31	C
30	ATOM	2140	CZ2	TRP A 279	−7.270	15.151	28.559	1.00	22.16	C
	ATOM	2141	CZ3	TRP A 279	−7.484	13.466	30.298	1.00	20.85	C
	ATOM	2142	CH2	TRP A 279	−7.641	14.780	29.828	1.00	22.45	C
	ATOM	2143	N	GLY A 280	−3.012	9.305	25.757	1.00	20.36	N
	ATOM	2144	CA	GLY A 280	−1.585	9.496	25.487	1.00	22.05	C
35	ATOM	2145	C	GLY A 280	−1.204	9.252	24.041	1.00	24.17	C
	ATOM	2146	O	GLY A 280	−0.033	9.486	23.712	1.00	20.78	O
	ATOM	2147	N	GLN A 281	−2.101	8.821	23.175	1.00	22.02	N
	ATOM	2148	CA	GLN A 281	−1.792	8.665	21.746	1.00	17.94	C
	ATOM	2149	C	GLN A 281	−1.425	10.024	21.156	1.00	16.82	C
40	ATOM	2150	O	GLN A 281	−2.077	11.031	21.445	1.00	23.09	O
	ATOM	2151	CB	GLN A 281	−2.938	8.032	20.965	1.00	22.30	C
	ATOM	2152	CG	GLN A 281	−3.128	6.535	21.211	1.00	29.03	C
	ATOM	2153	CD	GLN A 281	−4.426	6.108	20.538	1.00	38.84	C
	ATOM	2154	OE1	GLN A 281	−5.495	6.224	21.137	1.00	36.72	O
45	ATOM	2155	NE2	GLN A 281	−4.350	5.656	19.294	1.00	41.84	N
	ATOM	2156	N	TRP A 282	−0.324	10.090	20.396	1.00	19.27	N
	ATOM	2157	CA	TRP A 282	0.161	11.374	19.890	1.00	19.52	C
	ATOM	2158	C	TRP A 282	0.607	11.442	18.441	1.00	19.99	C
	ATOM	2159	O	TRP A 282	0.853	12.568	17.964	1.00	18.26	O
50	ATOM	2160	CB	TRP A 282	1.421	11.768	20.726	1.00	24.77	C
	ATOM	2161	CG	TRP A 282	2.451	10.677	20.637	1.00	23.68	C
	ATOM	2162	CD1	TRP A 282	2.525	9.543	21.411	1.00	22.06	C
	ATOM	2163	CD2	TRP A 282	3.533	10.578	19.695	1.00	25.36	C
	ATOM	2164	NE1	TRP A 282	3.562	8.748	20.988	1.00	30.20	N
55	ATOM	2165	CE2	TRP A 282	4.205	9.373	19.944	1.00	29.10	C
	ATOM	2166	CE3	TRP A 282	4.012	11.422	18.690	1.00	24.71	C
	ATOM	2167	CZ2	TRP A 282	5.322	8.960	19.211	1.00	25.73	C
	ATOM	2168	CZ3	TRP A 282	5.102	11.005	17.950	1.00	23.84	C
	ATOM	2169	CH2	TRP A 282	5.760	9.789	18.208	1.00	27.45	C

		ATOM	2170	N	CYS A 283	0.887	10.320	17.808	1.00	16.77	N
		ATOM	2171	CA	CYS A 283	1.492	10.339	16.481	1.00	16.10	C
		ATOM	2172	C	CYS A 283	0.472	10.336	15.367	1.00	17.58	C
		ATOM	2173	O	CYS A 283	-0.289	9.381	15.234	1.00	20.39	O
5		ATOM	2174	CB	CYS A 283	2.444	9.127	16.295	1.00	18.32	C
		ATOM	2175	SG	CYS A 283	3.323	9.248	14.714	1.00	15.79	S
		ATOM	2176	N	ASN A 284	0.435	11.401	14.596	1.00	15.88	N
		ATOM	2177	CA	ASN A 284	-0.422	11.537	13.431	1.00	13.86	C
		ATOM	2178	C	ASN A 284	-1.829	11.000	13.718	1.00	16.24	C
10		ATOM	2179	O	ASN A 284	-2.345	10.168	12.992	1.00	17.28	O
		ATOM	2180	CB	ASN A 284	0.216	10.872	12.227	1.00	15.80	C
		ATOM	2181	CG	ASN A 284	1.581	11.440	11.897	1.00	15.74	C
		ATOM	2182	OD1	ASN A 284	1.841	12.650	12.011	1.00	15.56	O
		ATOM	2183	ND2	ASN A 284	2.485	10.551	11.514	1.00	17.85	N
15		ATOM	2184	N	VAL A 285	-2.409	11.576	14.761	1.00	17.47	N
		ATOM	2185	CA	VAL A 285	-3.742	11.122	15.191	1.00	16.74	C
		ATOM	2186	C	VAL A 285	-4.768	11.436	14.133	1.00	17.06	C
		ATOM	2187	O	VAL A 285	-4.852	12.490	13.520	1.00	17.11	O
		ATOM	2188	CB	VAL A 285	-4.070	11.692	16.583	1.00	17.52	C
20		ATOM	2189	CG1	VAL A 285	-5.533	11.578	16.982	1.00	20.33	C
		ATOM	2190	CG2	VAL A 285	-3.137	11.015	17.559	1.00	16.10	C
		ATOM	2191	N	ASN A 286	-5.632	10.437	13.899	1.00	16.18	N
		ATOM	2192	CA	ASN A 286	-6.659	10.611	12.861	1.00	17.11	C
		ATOM	2193	C	ASN A 286	-7.893	9.793	13.252	1.00	18.44	C
25		ATOM	2194	O	ASN A 286	-7.786	8.743	13.869	1.00	22.45	O
		ATOM	2195	CB	ASN A 286	-6.118	10.224	11.501	1.00	17.36	C
		ATOM	2196	CG	ASN A 286	-5.680	8.764	11.483	1.00	32.33	C
		ATOM	2197	OD1	ASN A 286	-6.441	7.864	11.101	1.00	24.90	O
		ATOM	2198	ND2	ASN A 286	-4.454	8.512	11.945	1.00	23.19	N
30		ATOM	2199	N	PRO A 287	-9.047	10.320	12.882	1.00	19.71	N
		ATOM	2200	CA	PRO A 287	-9.260	11.547	12.159	1.00	18.73	C
		ATOM	2201	C	PRO A 287	-9.056	12.834	12.940	1.00	16.37	C
		ATOM	2202	O	PRO A 287	-9.320	12.879	14.143	1.00	18.92	O
		ATOM	2203	CB	PRO A 287	-10.755	11.586	11.728	1.00	20.00	C
35		ATOM	2204	CG	PRO A 287	-11.372	10.469	12.522	1.00	26.90	C
		ATOM	2205	CD	PRO A 287	-10.318	9.642	13.214	1.00	21.06	C
		ATOM	2206	N	ALA A 288	-8.542	13.836	12.242	1.00	16.47	N
		ATOM	2207	CA	ALA A 288	-8.372	15.153	12.888	1.00	17.03	C
		ATOM	2208	C	ALA A 288	-8.635	16.273	11.882	1.00	11.14	C
40		ATOM	2209	O	ALA A 288	-8.603	16.070	10.668	1.00	14.93	O
		ATOM	2210	CB	ALA A 288	-6.960	15.289	13.457	1.00	15.95	C
		ATOM	2211	N	GLY A 289	-8.927	17.469	12.425	1.00	14.35	N
		ATOM	2212	CA	GLY A 289	-9.136	18.589	11.524	1.00	15.43	C
		ATOM	2213	C	GLY A 289	-8.314	19.791	11.997	1.00	15.53	C
45		ATOM	2214	O	GLY A 289	-7.914	19.827	13.175	1.00	14.49	O
		ATOM	2215	N	PHE A 290	-8.111	20.711	11.056	1.00	13.29	N
		ATOM	2216	CA	PHE A 290	-7.558	22.007	11.474	1.00	13.91	C
		ATOM	2217	C	PHE A 290	-8.529	22.599	12.513	1.00	14.01	C
		ATOM	2218	O	PHE A 290	-9.783	22.550	12.343	1.00	18.13	O
50		ATOM	2219	CB	PHE A 290	-7.478	23.029	10.376	1.00	13.41	C
		ATOM	2220	CG	PHE A 290	-6.472	22.787	9.290	1.00	14.54	C
		ATOM	2221	CD1	PHE A 290	-5.148	22.532	9.661	1.00	15.61	C
		ATOM	2222	CD2	PHE A 290	-6.759	22.900	7.947	1.00	15.38	C
		ATOM	2223	CE1	PHE A 290	-4.178	22.356	8.706	1.00	16.64	C
55		ATOM	2224	CE2	PHE A 290	-5.793	22.724	6.981	1.00	16.02	C
		ATOM	2225	CZ	PHE A 290	-4.489	22.434	7.364	1.00	13.96	C
		ATOM	2226	N	GLY A 291	-7.989	23.115	13.608	1.00	16.12	N
		ATOM	2227	CA	GLY A 291	-8.858	23.685	14.639	1.00	15.83	C
		ATOM	2228	C	GLY A 291	-9.074	25.179	14.347	1.00	15.05	C

	ATOM	2229	O	GLY A 291	-8.734	25.731	13.322	1.00	16.86	O
	ATOM	2230	N	GLN A 292	-9.714	25.814	15.329	1.00	16.03	N
	ATOM	2231	CA	GLN A 292	-9.998	27.240	15.283	1.00	18.15	C
	ATOM	2232	C	GLN A 292	-8.728	28.041	15.042	1.00	16.47	C
5	ATOM	2233	O	GLN A 292	-7.733	27.885	15.754	1.00	20.75	O
	ATOM	2234	CB	GLN A 292	-10.569	27.625	16.671	1.00	25.11	C
	ATOM	2235	CG	GLN A 292	-10.367	29.061	17.091	1.00	36.07	C
	ATOM	2236	CD	GLN A 292	-11.444	29.979	16.538	1.00	39.06	C
	ATOM	2237	OE1	GLN A 292	-12.607	29.754	16.883	1.00	42.29	O
10	ATOM	2238	NE2	GLN A 292	-11.079	30.982	15.746	1.00	33.92	N
	ATOM	2239	N	PRO A 293	-8.759	28.904	14.063	1.00	19.51	N
	ATOM	2240	CA	PRO A 293	-7.624	29.791	13.787	1.00	16.62	C
	ATOM	2241	C	PRO A 293	-7.430	30.766	14.931	1.00	17.64	C
	ATOM	2242	O	PRO A 293	-8.296	31.000	15.764	1.00	19.12	O
15	ATOM	2243	CB	PRO A 293	-7.937	30.514	12.468	1.00	21.39	C
	ATOM	2244	CG	PRO A 293	-8.969	29.551	11.868	1.00	21.89	C
	ATOM	2245	CD	PRO A 293	-9.802	29.074	13.063	1.00	20.59	C
	ATOM	2246	N	PHE A 294	-6.244	31.406	14.941	1.00	15.74	N
	ATOM	2247	CA	PHE A 294	-5.933	32.344	15.986	1.00	18.02	C
20	ATOM	2248	C	PHE A 294	-7.076	33.330	16.288	1.00	19.91	C
	ATOM	2249	O	PHE A 294	-7.647	33.926	15.394	1.00	19.02	O
	ATOM	2250	CB	PHE A 294	-4.656	33.121	15.620	1.00	18.48	C
	ATOM	2251	CG	PHE A 294	-4.543	34.434	16.357	1.00	18.57	C
	ATOM	2252	CD1	PHE A 294	-4.124	34.446	17.665	1.00	17.71	C
25	ATOM	2253	CD2	PHE A 294	-4.873	35.640	15.760	1.00	20.19	C
	ATOM	2254	CE1	PHE A 294	-4.048	35.634	18.374	1.00	22.25	C
	ATOM	2255	CE2	PHE A 294	-4.789	36.832	16.450	1.00	17.34	C
	ATOM	2256	CZ	PHE A 294	-4.381	36.844	17.773	1.00	17.52	C
	ATOM	2257	N	THR A 295	-7.275	33.509	17.600	1.00	18.12	N
30	ATOM	2258	CA	THR A 295	-8.237	34.492	18.090	1.00	19.71	C
	ATOM	2259	C	THR A 295	-7.955	34.819	19.546	1.00	18.88	C
	ATOM	2260	O	THR A 295	-7.459	33.959	20.293	1.00	20.71	O
	ATOM	2261	CB	THR A 295	-9.702	34.025	17.895	1.00	16.83	C
	ATOM	2262	OG1	THR A 295	-10.540	35.131	18.350	1.00	22.18	O
35	ATOM	2263	CG2	THR A 295	-10.020	32.817	18.737	1.00	26.18	C
	ATOM	2264	N	THR A 296	-8.328	36.047	19.971	1.00	18.59	N
	ATOM	2265	CA	THR A 296	-8.221	36.396	21.376	1.00	19.93	C
	ATOM	2266	C	THR A 296	-9.611	36.301	22.028	1.00	22.13	C
	ATOM	2267	O	THR A 296	-9.744	36.454	23.241	1.00	20.87	O
40	ATOM	2268	CB	THR A 296	-7.661	37.802	21.631	1.00	26.99	C
	ATOM	2269	OG1	THR A 296	-8.369	38.746	20.796	1.00	23.44	O
	ATOM	2270	CG2	THR A 296	-6.195	37.975	21.282	1.00	23.00	C
	ATOM	2271	N	ASN A 297	-10.607	35.947	21.225	1.00	24.08	N
	ATOM	2272	CA	ASN A 297	-11.993	35.733	21.725	1.00	23.19	C
45	ATOM	2273	C	ASN A 297	-12.052	34.316	22.287	1.00	21.04	C
	ATOM	2274	O	ASN A 297	-12.578	33.371	21.686	1.00	25.87	O
	ATOM	2275	CB	ASN A 297	-12.934	35.862	20.537	1.00	28.03	C
	ATOM	2276	CG	ASN A 297	-13.122	37.223	19.915	1.00	44.66	C
	ATOM	2277	OD1	ASN A 297	-12.951	38.288	20.520	1.00	51.46	O
50	ATOM	2278	ND2	ASN A 297	-13.519	37.244	18.635	1.00	44.39	N
	ATOM	2279	N	THR A 298	-11.458	34.105	23.451	1.00	22.06	N
	ATOM	2280	CA	THR A 298	-11.312	32.803	24.064	1.00	21.60	C
	ATOM	2281	C	THR A 298	-12.372	32.416	25.064	1.00	21.86	C
	ATOM	2282	O	THR A 298	-12.474	31.269	25.519	1.00	28.44	O
55	ATOM	2283	CB	THR A 298	-9.923	32.741	24.772	1.00	20.07	C
	ATOM	2284	OG1	THR A 298	-9.972	33.643	25.882	1.00	20.59	O
	ATOM	2285	CG2	THR A 298	-8.848	33.157	23.786	1.00	17.68	C
	ATOM	2286	N	ASN A 299	-13.136	33.422	25.519	1.00	26.27	N
	ATOM	2287	CA	ASN A 299	-14.174	33.192	26.525	1.00	27.86	C

	ATOM	2288	C	ASN	A	299	−13.626	32.575	27.790	1.00	27.60		C
	ATOM	2289	O	ASN	A	299	−14.276	31.744	28.437	1.00	33.49		O
	ATOM	2290	CB	ASN	A	299	−15.260	32.299	25.906	1.00	29.99		C
	ATOM	2291	CG	ASN	A	299	−16.009	33.012	24.804	1.00	41.81		C
5	ATOM	2292	OD1	ASN	A	299	−16.247	32.460	23.728	1.00	53.74		O
	ATOM	2293	ND2	ASN	A	299	−16.390	34.253	25.099	1.00	51.24		N
	ATOM	2294	N	ASN	A	300	−12.389	32.913	28.161	1.00	25.75		N
	ATOM	2295	CA	ASN	A	300	−11.731	32.425	29.348	1.00	27.94		C
	ATOM	2296	C	ASN	A	300	−10.626	33.425	29.680	1.00	24.49		C
10	ATOM	2297	O	ASN	A	300	−9.723	33.658	28.908	1.00	23.71		O
	ATOM	2298	CB	ASN	A	300	−11.167	31.012	29.147	1.00	27.27		C
	ATOM	2299	CG	ASN	A	300	−10.493	30.462	30.369	1.00	21.67		C
	ATOM	2300	OD1	ASN	A	300	−9.985	31.174	31.217	1.00	23.30		O
	ATOM	2301	ND2	ASN	A	300	−10.463	29.121	30.514	1.00	22.06		N
15	ATOM	2302	N	PRO	A	301	−10.743	34.051	30.831	1.00	29.89		N
	ATOM	2303	CA	PRO	A	301	−9.859	35.064	31.350	1.00	30.80		C
	ATOM	2304	C	PRO	A	301	−8.405	34.617	31.461	1.00	30.75		C
	ATOM	2305	O	PRO	A	301	−7.486	35.423	31.353	1.00	25.94		O
	ATOM	2306	CB	PRO	A	301	−10.317	35.436	32.785	1.00	25.23		C
20	ATOM	2307	CG	PRO	A	301	−11.418	34.448	33.052	1.00	30.76		C
	ATOM	2308	CD	PRO	A	301	−11.839	33.763	31.782	1.00	33.01		C
	ATOM	2309	N	ASN	A	302	−8.222	33.326	31.719	1.00	23.27		N
	ATOM	2310	CA	ASN	A	302	−6.910	32.735	31.869	1.00	20.97		C
	ATOM	2311	C	ASN	A	302	−6.277	32.405	30.530	1.00	24.01		C
25	ATOM	2312	O	ASN	A	302	−5.148	31.916	30.552	1.00	20.89		O
	ATOM	2313	CB	ASN	A	302	−7.082	31.403	32.631	1.00	25.19		C
	ATOM	2314	CG	ASN	A	302	−7.806	31.646	33.957	1.00	27.19		C
	ATOM	2315	OD1	ASN	A	302	−8.855	31.068	34.242	1.00	25.05		O
	ATOM	2316	ND2	ASN	A	302	−7.182	32.493	34.750	1.00	24.65		N
30	ATOM	2317	N	VAL	A	303	−6.990	32.602	29.442	1.00	18.61		N
	ATOM	2318	CA	VAL	A	303	−6.442	32.199	28.134	1.00	20.42		C
	ATOM	2319	C	VAL	A	303	−6.288	33.441	27.263	1.00	24.90		C
	ATOM	2320	O	VAL	A	303	−7.251	34.018	26.765	1.00	21.13		O
	ATOM	2321	CB	VAL	A	303	−7.316	31.130	27.461	1.00	18.54		C
35	ATOM	2322	CG1	VAL	A	303	−6.696	30.695	26.124	1.00	18.31		C
	ATOM	2323	CG2	VAL	A	303	−7.460	29.870	28.315	1.00	19.58		C
	ATOM	2324	N	ASP	A	304	−5.048	33.910	27.097	1.00	19.18		N
	ATOM	2325	CA	ASP	A	304	−4.734	35.011	26.238	1.00	15.86		C
	ATOM	2326	C	ASP	A	304	−5.156	34.814	24.769	1.00	17.85		C
40	ATOM	2327	O	ASP	A	304	−5.612	35.718	24.070	1.00	20.58		O
	ATOM	2328	CB	ASP	A	304	−3.230	35.343	26.184	1.00	19.27		C
	ATOM	2329	CG	ASP	A	304	−2.708	36.094	27.388	1.00	22.98		C
	ATOM	2330	OD1	ASP	A	304	−3.493	36.707	28.138	1.00	22.43		O
	ATOM	2331	OD2	ASP	A	304	−1.472	36.094	27.606	1.00	18.86		O
45	ATOM	2332	N	ALA	A	305	−4.924	33.623	24.221	1.00	17.98		N
	ATOM	2333	CA	ALA	A	305	−5.254	33.428	22.814	1.00	17.71		C
	ATOM	2334	C	ALA	A	305	−5.275	31.957	22.431	1.00	19.11		C
	ATOM	2335	O	ALA	A	305	−4.637	31.115	23.076	1.00	17.63		O
	ATOM	2336	CB	ALA	A	305	−4.242	34.158	21.922	1.00	18.77		C
50	ATOM	2337	N	ILE	A	306	−6.068	31.675	21.413	1.00	18.04		N
	ATOM	2338	CA	ILE	A	306	−5.999	30.372	20.744	1.00	15.41		C
	ATOM	2339	C	ILE	A	306	−5.022	30.628	19.604	1.00	13.99		C
	ATOM	2340	O	ILE	A	306	−5.103	31.676	18.961	1.00	17.21		U
	ATOM	2341	CB	ILE	A	306	−7.353	29.841	20.204	1.00	17.17		C
55	ATOM	2342	CG1	ILE	A	306	−8.169	29.421	21.427	1.00	18.89		C
	ATOM	2343	CG2	ILE	A	306	−7.116	28.702	19.206	1.00	15.71		C
	ATOM	2344	CD1	ILE	A	306	−9.660	29.264	21.276	1.00	24.44		C
	ATOM	2345	N	VAL	A	307	−3.976	29.811	19.464	1.00	14.07		N
	ATOM	2346	CA	VAL	A	307	−2.988	29.942	18.410	1.00	16.02		C

		ATOM	2347	C	VAL	A	307	-2.806	28.614	17.675	1.00	14.25	C
		ATOM	2348	O	VAL	A	307	-3.426	27.581	18.026	1.00	12.07	O
		ATOM	2349	CB	VAL	A	307	-1.602	30.385	18.993	1.00	10.04	C
		ATOM	2350	CG1	VAL	A	307	-1.709	31.787	19.590	1.00	18.88	C
5		ATOM	2351	CG2	VAL	A	307	-1.171	29.347	20.032	1.00	15.95	C
		ATOM	2352	N	TRP	A	308	-2.073	28.598	16.567	1.00	14.38	N
		ATOM	2353	CA	TRP	A	308	-1.582	27.370	15.937	1.00	13.45	C
		ATOM	2354	C	TRP	A	308	-0.048	27.348	16.136	1.00	12.10	C
		ATOM	2355	O	TRP	A	308	0.666	28.300	15.767	1.00	15.65	O
10		ATOM	2356	CB	TRP	A	308	-1.868	27.212	14.458	1.00	13.60	C
		ATOM	2357	CG	TRP	A	308	-3.279	26.991	14.043	1.00	13.39	C
		ATOM	2358	CD1	TRP	A	308	-4.388	27.092	14.809	1.00	15.59	C
		ATOM	2359	CD2	TRP	A	308	-3.696	26.593	12.734	1.00	10.36	C
		ATOM	2360	NE1	TRP	A	308	-5.515	26.770	14.054	1.00	15.23	N
15		ATOM	2361	CE2	TRP	A	308	-5.107	26.479	12.789	1.00	12.08	C
		ATOM	2362	CE3	TRP	A	308	-3.021	26.329	11.530	1.00	12.71	C
		ATOM	2363	CZ2	TRP	A	308	-5.823	26.135	11.633	1.00	14.21	C
		ATOM	2364	CZ3	TRP	A	308	-3.738	25.990	10.407	1.00	14.85	C
		ATOM	2365	CH2	TRP	A	308	-5.135	25.870	10.483	1.00	16.00	C
20		ATOM	2366	N	VAL	A	309	0.413	26.249	16.757	1.00	13.08	N
		ATOM	2367	CA	VAL	A	309	1.864	26.155	17.006	1.00	11.26	C
		ATOM	2368	C	VAL	A	309	2.422	25.027	16.146	1.00	10.78	C
		ATOM	2369	O	VAL	A	309	3.254	25.284	15.308	1.00	13.32	O
		ATOM	2370	CB	VAL	A	309	2.080	25.918	18.507	1.00	8.84	C
25		ATOM	2371	CG1	VAL	A	309	3.579	25.973	18.800	1.00	10.12	C
		ATOM	2372	CG2	VAL	A	309	1.338	26.928	19.376	1.00	15.13	C
		ATOM	2373	N	LYS	A	310	1.965	23.761	16.347	1.00	12.84	N
		ATOM	2374	CA	LYS	A	310	2.445	22.719	15.437	1.00	14.13	C
		ATOM	2375	C	LYS	A	310	1.918	22.993	14.044	1.00	13.15	C
30		ATOM	2376	O	LYS	A	310	0.720	23.277	13.871	1.00	13.30	O
		ATOM	2377	CB	LYS	A	310	1.808	21.402	15.905	1.00	13.66	C
		ATOM	2378	CG	LYS	A	310	1.851	20.224	14.964	1.00	12.89	C
		ATOM	2379	CD	LYS	A	310	3.249	19.629	14.825	1.00	15.43	C
		ATOM	2380	CE	LYS	A	310	3.193	18.660	13.641	1.00	13.14	C
35		ATOM	2381	NZ	LYS	A	310	4.483	17.865	13.599	1.00	18.31	N
		ATOM	2382	N	PRO	A	311	2.722	22.855	13.039	1.00	12.10	N
		ATOM	2383	CA	PRO	A	311	2.281	23.027	11.635	1.00	12.11	C
		ATOM	2384	C	PRO	A	311	1.569	21.776	11.145	1.00	14.07	C
		ATOM	2385	O	PRO	A	311	2.270	20.812	10.803	1.00	13.76	O
40		ATOM	2386	CB	PRO	A	311	3.531	23.309	10.796	1.00	14.97	C
		ATOM	2387	CG	PRO	A	311	4.536	23.666	11.894	1.00	16.80	C
		ATOM	2388	CD	PRO	A	311	4.177	22.732	13.048	1.00	13.71	C
		ATOM	2389	N	GLY	A	312	0.245	21.712	11.140	1.00	12.88	N
		ATOM	2390	CA	GLY	A	312	-0.478	20.520	10.763	1.00	15.35	C
45		ATOM	2391	C	GLY	A	312	-0.218	20.217	9.284	1.00	15.66	C
		ATOM	2392	O	GLY	A	312	-0.432	21.081	8.432	1.00	14.37	O
		ATOM	2393	N	GLY	A	313	0.242	18.983	9.091	1.00	12.66	N
		ATOM	2394	CA	GLY	A	313	0.651	18.507	7.772	1.00	12.24	C
		ATOM	2395	C	GLY	A	313	2.121	18.063	7.876	1.00	14.01	C
50		ATOM	2396	O	GLY	A	313	2.548	17.178	7.132	1.00	15.98	O
		ATOM	2397	N	GLU	A	314	2.858	18.604	8.844	1.00	15.55	N
		ATOM	2398	CA	GLU	A	314	4.220	18.088	9.099	1.00	16.28	C
		ATOM	2399	C	GLU	A	314	4.099	16.836	9.963	1.00	17.65	C
		ATOM	2400	O	GLU	A	314	3.464	16.906	10.997	1.00	14.94	O
55		ATOM	2401	CB	GLU	A	314	5.002	19.155	9.912	1.00	15.42	C
		ATOM	2402	CG	GLU	A	314	5.448	20.292	9.018	1.00	14.51	C
		ATOM	2403	CD	GLU	A	314	6.343	21.356	9.600	1.00	21.84	C
		ATOM	2404	OE1	GLU	A	314	6.761	21.212	10.767	1.00	22.23	O
		ATOM	2405	OE2	GLU	A	314	6.631	22.367	8.915	1.00	22.72	O

	ATOM	2406	N	SER	A	315	4.636	15.699	9.550	1.00	14.50	N
	ATOM	2407	CA	SER	A	315	4.468	14.474	10.303	1.00	14.77	C
	ATOM	2408	C	SER	A	315	5.050	14.546	11.706	1.00	15.80	C
	ATOM	2409	O	SER	A	315	6.062	15.191	11.967	1.00	17.95	O
5	ATOM	2410	CB	SER	A	315	5.106	13.334	9.520	1.00	13.06	C
	ATOM	2411	OG	SER	A	315	4.970	12.075	10.141	1.00	17.54	O
	ATOM	2412	N	ASP	A	316	4.397	13.801	12.585	1.00	12.32	N
	ATOM	2413	CA	ASP	A	316	4.886	13.609	13.931	1.00	16.00	C
	ATOM	2414	C	ASP	A	316	5.972	12.506	13.986	1.00	14.01	C
10	ATOM	2415	O	ASP	A	316	6.657	12.408	14.998	1.00	15.96	O
	ATOM	2416	CB	ASP	A	316	3.755	13.207	14.871	1.00	13.64	C
	ATOM	2417	CG	ASP	A	316	2.728	14.328	15.016	1.00	16.05	C
	ATOM	2418	OD1	ASP	A	316	3.170	15.484	15.121	1.00	17.74	O
	ATOM	2419	OD2	ASP	A	316	1.536	13.946	15.002	1.00	21.87	O
15	ATOM	2420	N	GLY	A	317	5.965	11.649	12.958	1.00	15.50	N
	ATOM	2421	CA	GLY	A	317	6.890	10.494	12.924	1.00	12.47	C
	ATOM	2422	C	GLY	A	317	6.293	9.453	11.979	1.00	14.64	C
	ATOM	2423	O	GLY	A	317	5.155	9.623	11.523	1.00	16.59	O
	ATOM	2424	N	GLN	A	318	6.977	8.340	11.737	1.00	14.21	N
20	ATOM	2425	CA	GLN	A	318	6.502	7.304	10.831	1.00	14.75	C
	ATOM	2426	C	GLN	A	318	5.593	6.349	11.600	1.00	22.28	C
	ATOM	2427	O	GLN	A	318	5.967	5.234	11.947	1.00	22.93	O
	ATOM	2428	CB	GLN	A	318	7.679	6.551	10.217	1.00	16.11	C
	ATOM	2429	CG	GLN	A	318	8.723	7.423	9.590	1.00	24.55	C
25	ATOM	2430	CD	GLN	A	318	9.902	6.636	9.018	1.00	31.53	C
	ATOM	2431	OE1	GLN	A	318	10.937	6.714	9.660	1.00	27.30	O
	ATOM	2432	NE2	GLN	A	318	9.546	5.995	7.915	1.00	29.42	N
	ATOM	2433	N	CYS	A	319	4.391	6.858	11.897	1.00	19.08	N
	ATOM	2434	CA	CYS	A	319	3.477	6.164	12.770	1.00	16.55	C
30	ATOM	2435	C	CYS	A	319	2.093	6.788	12.606	1.00	22.67	C
	ATOM	2436	O	CYS	A	319	1.943	7.782	11.891	1.00	16.92	O
	ATOM	2437	CB	CYS	A	319	3.965	6.301	14.213	1.00	21.55	C
	ATOM	2438	SG	CYS	A	319	4.718	7.796	14.848	1.00	17.95	S
	ATOM	2439	N	GLY	A	320	1.130	6.124	13.233	1.00	22.31	N
35	ATOM	2440	CA	GLY	A	320	-0.208	6.629	13.343	1.00	22.24	C
	ATOM	2441	C	GLY	A	320	-1.176	6.558	12.208	1.00	27.16	C
	ATOM	2442	O	GLY	A	320	-2.371	6.257	12.400	1.00	29.10	O
	ATOM	2443	N	MET	A	321	-0.736	6.903	11.019	1.00	29.52	N
	ATOM	2444	CA	MET	A	321	-1.576	6.966	9.836	1.00	31.67	C
40	ATOM	2445	C	MET	A	321	-0.722	6.420	8.705	1.00	27.43	C
	ATOM	2446	O	MET	A	321	0.483	6.663	8.652	1.00	30.77	O
	ATOM	2447	CB	MET	A	321	-2.121	8.365	9.601	1.00	28.11	C
	ATOM	2448	CG	MET	A	321	-3.156	8.405	8.480	1.00	31.81	C
	ATOM	2449	SD	MET	A	321	-3.906	10.023	8.248	1.00	31.22	S
45	ATOM	2450	CE	MET	A	321	-3.513	10.340	6.526	1.00	26.93	C
	ATOM	2451	N	GLY	A	322	-1.329	5.533	7.926	1.00	32.97	N
	ATOM	2452	CA	GLY	A	322	-0.603	4.883	6.831	1.00	31.12	C
	ATOM	2453	C	GLY	A	322	0.025	5.915	5.908	1.00	25.96	C
	ATOM	2454	O	GLY	A	322	-0.624	6.902	5.547	1.00	34.14	O
50	ATOM	2455	N	GLY	A	323	1.288	5.724	5.539	1.00	34.72	N
	ATOM	2456	CA	GLY	A	323	1.967	6.646	4.640	1.00	33.66	C
	ATOM	2457	C	GLY	A	323	2.742	7.742	5.334	1.00	30.88	C
	ATOM	2458	O	GLY	A	323	3.421	8.547	4.684	1.00	29.21	O
	ATOM	2459	N	ALA	A	324	2.726	7.769	6.667	1.00	24.89	N
55	ATOM	2460	CA	ALA	A	324	3.457	8.775	7.412	1.00	21.70	C
	ATOM	2461	C	ALA	A	324	4.966	8.740	7.280	1.00	25.53	C
	ATOM	2462	O	ALA	A	324	5.655	7.743	7.577	1.00	22.74	O
	ATOM	2463	CB	ALA	A	324	3.092	8.591	8.892	1.00	17.64	C
	ATOM	2464	N	PRO	A	325	5.539	9.881	6.893	1.00	25.63	N

	ATOM	2465	CA	PRO	A	325	6.970	10.103	6.811	1.00 26.66	C
	ATOM	2466	C	PRO	A	325	7.646	10.398	8.125	1.00 29.25	C
	ATOM	2467	O	PRO	A	325	6.894	10.457	9.109	1.00 21.69	O
	ATOM	2468	CB	PRO	A	325	7.111	11.313	5.850	1.00 22.47	C
5	ATOM	2469	CG	PRO	A	325	5.802	12.037	6.045	1.00 21.32	C
	ATOM	2470	CD	PRO	A	325	4.739	11.079	6.525	1.00 17.88	C
	ATOM	2471	N	ALA	A	326	8.954	10.544	8.317	1.00 19.09	N
	ATOM	2472	CA	ALA	A	326	9.615	10.890	9.561	1.00 23.89	C
	ATOM	2473	C	ALA	A	326	9.216	12.216	10.173	1.00 23.29	C
10	ATOM	2474	O	ALA	A	326	8.714	13.059	9.401	1.00 25.62	O
	ATOM	2475	CB	ALA	A	326	11.139	10.907	9.252	1.00 27.19	C
	ATOM	2476	N	ALA	A	327	9.426	12.504	11.455	1.00 19.22	N
	ATOM	2477	CA	ALA	A	327	9.023	13.727	12.100	1.00 26.18	C
	ATOM	2478	C	ALA	A	327	9.522	14.940	11.333	1.00 26.83	C
15	ATOM	2479	O	ALA	A	327	10.684	15.067	10.954	1.00 27.01	O
	ATOM	2480	CB	ALA	A	327	9.482	13.838	13.551	1.00 27.41	C
	ATOM	2481	N	GLY	A	328	8.623	15.877	11.114	1.00 23.90	N
	ATOM	2482	CA	GLY	A	328	8.851	17.114	10.424	1.00 21.79	C
	ATOM	2483	C	GLY	A	328	8.712	17.019	8.906	1.00 18.01	C
20	ATOM	2484	O	GLY	A	328	8.705	18.086	8.313	1.00 20.46	O
	ATOM	2485	N	MET	A	329	8.605	15.830	8.317	1.00 20.58	N
	ATOM	2486	CA	MET	A	329	8.483	15.690	6.867	1.00 19.38	C
	ATOM	2487	C	MET	A	329	7.020	15.942	6.473	1.00 15.08	C
	ATOM	2488	O	MET	A	329	6.132	15.611	7.248	1.00 15.65	O
25	ATOM	2489	CB	MET	A	329	8.920	14.272	6.515	1.00 25.54	C
	ATOM	2490	CG	MET	A	329	10.030	13.990	5.558	1.00 38.71	C
	ATOM	2491	SD	MET	A	329	11.606	14.772	5.863	1.00 34.88	S
	ATOM	2492	CE	MET	A	329	12.668	13.369	6.212	1.00 26.53	C
	ATOM	2493	N	TRP	A	330	6.793	16.575	5.336	1.00 15.69	N
30	ATOM	2494	CA	TRP	A	330	5.437	16.883	4.904	1.00 16.18	C
	ATOM	2495	C	TRP	A	330	4.669	15.610	4.585	1.00 14.06	C
	ATOM	2496	O	TRP	A	330	5.159	14.658	3.978	1.00 18.94	O
	ATOM	2497	CB	TRP	A	330	5.527	17.777	3.670	1.00 17.74	C
	ATOM	2498	CG	TRP	A	330	4.163	18.313	3.348	1.00 15.93	C
35	ATOM	2499	CD1	TRP	A	330	3.367	18.005	2.307	1.00 16.88	C
	ATOM	2500	CD2	TRP	A	330	3.478	19.317	4.118	1.00 17.09	C
	ATOM	2501	NE1	TRP	A	330	2.180	18.738	2.345	1.00 15.83	N
	ATOM	2502	CE2	TRP	A	330	2.266	19.558	3.461	1.00 15.02	C
	ATOM	2503	CE3	TRP	A	330	3.756	20.024	5.288	1.00 16.31	C
40	ATOM	2504	CZ2	TRP	A	330	1.309	20.466	3.919	1.00 14.94	C
	ATOM	2505	CZ3	TRP	A	330	2.836	20.949	5.753	1.00 17.53	C
	ATOM	2506	CH2	TRP	A	330	1.606	21.153	5.078	1.00 16.24	C
	ATOM	2507	N	PHE	A	331	3.433	15.559	5.065	1.00 16.09	N
	ATOM	2508	CA	PHE	A	331	2.550	14.406	4.961	1.00 14.41	C
45	ATOM	2509	C	PHE	A	331	1.262	14.921	4.313	1.00 16.69	C
	ATOM	2510	O	PHE	A	331	0.322	15.273	5.035	1.00 15.30	O
	ATOM	2511	CB	PHE	A	331	2.322	13.836	6.367	1.00 16.27	C
	ATOM	2512	CG	PHE	A	331	1.521	12.564	6.476	1.00 17.29	C
	ATOM	2513	CD1	PHE	A	331	1.080	11.879	5.353	1.00 18.71	C
50	ATOM	2514	CD2	PHE	A	331	1.246	12.028	7.726	1.00 15.36	C
	ATOM	2515	CE1	PHE	A	331	0.357	10.699	5.463	1.00 18.22	C
	ATOM	2516	CE2	PHE	A	331	0.517	10.859	7.857	1.00 16.90	C
	ATOM	2517	CZ	PHE	A	331	0.080	10.205	6.721	1.00 19.20	C
	ATOM	2518	N	ASP	A	332	1.326	15.006	2.969	1.00 17.34	N
55	ATOM	2519	CA	ASP	A	332	0.227	15.702	2.292	1.00 19.24	C
	ATOM	2520	C	ASP	A	332	-1.131	15.069	2.432	1.00 16.36	C
	ATOM	2521	O	ASP	A	332	-2.111	15.825	2.522	1.00 16.52	O
	ATOM	2522	CB	ASP	A	332	0.641	15.973	0.839	1.00 15.59	C
	ATOM	2523	CG	ASP	A	332	-0.222	17.075	0.249	1.00 18.84	C

	ATOM	2524	OD1	ASP	A	332	-0.019	18.223	0.689	1.00	18.37	O
	ATOM	2525	OD2	ASP	A	332	-1.055	16.776	-0.643	1.00	21.30	O
	ATOM	2526	N	ALA	A	333	-1.266	13.736	2.534	1.00	16.52	N
	ATOM	2527	CA	ALA	A	333	-2.595	13.180	2.750	1.00	16.87	C
5	ATOM	2528	C	ALA	A	333	-3.173	13.621	4.115	1.00	13.54	C
	ATOM	2529	O	ALA	A	333	-4.387	13.716	4.262	1.00	16.52	O
	ATOM	2530	CB	ALA	A	333	-2.514	11.657	2.691	1.00	20.56	C
	ATOM	2531	N	TYR	A	334	-2.261	13.791	5.066	1.00	15.39	N
	ATOM	2532	CA	TYR	A	334	-2.709	14.255	6.379	1.00	14.46	C
10	ATOM	2533	C	TYR	A	334	-3.178	15.708	6.293	1.00	15.06	C
	ATOM	2534	O	TYR	A	334	-4.201	16.014	6.922	1.00	16.95	O
	ATOM	2535	CB	TYR	A	334	-1.604	14.026	7.397	1.00	14.33	C
	ATOM	2536	CG	TYR	A	334	-2.063	14.109	8.826	1.00	16.96	C
	ATOM	2537	CD1	TYR	A	334	-2.223	15.362	9.413	1.00	12.69	C
15	ATOM	2538	CD2	TYR	A	334	-2.320	13.005	9.604	1.00	17.31	C
	ATOM	2539	CE1	TYR	A	334	-2.633	15.496	10.733	1.00	14.54	C
	ATOM	2540	CE2	TYR	A	334	-2.720	13.099	10.917	1.00	16.18	C
	ATOM	2541	CZ	TYR	A	334	-2.873	14.362	11.474	1.00	14.97	C
	ATOM	2542	OH	TYR	A	334	-3.293	14.462	12.773	1.00	16.04	O
20	ATOM	2543	N	ALA	A	335	-2.419	16.527	5.566	1.00	17.05	N
	ATOM	2544	CA	ALA	A	335	-2.806	17.906	5.335	1.00	18.69	C
	ATOM	2545	C	ALA	A	335	-4.152	17.990	4.599	1.00	18.05	C
	ATOM	2546	O	ALA	A	335	-5.010	18.776	5.025	1.00	16.39	O
	ATOM	2547	CB	ALA	A	335	-1.763	18.653	4.526	1.00	16.72	C
25	ATOM	2548	N	GLN	A	336	-4.406	17.124	3.644	1.00	17.93	N
	ATOM	2549	CA	GLN	A	336	-5.726	17.086	2.988	1.00	16.33	C
	ATOM	2550	C	GLN	A	336	-6.789	16.721	4.000	1.00	14.31	C
	ATOM	2551	O	GLN	A	336	-7.854	17.362	4.089	1.00	18.81	O
	ATOM	2552	CB	GLN	A	336	-5.681	16.104	1.788	1.00	16.97	C
30	ATOM	2553	CG	GLN	A	336	-4.786	16.614	0.669	1.00	21.18	C
	ATOM	2554	CD	GLN	A	336	-4.707	15.562	-0.429	1.00	22.27	C
	ATOM	2555	OE1	GLN	A	336	-5.782	15.113	-0.864	1.00	26.15	O
	ATOM	2556	NE2	GLN	A	336	-3.511	15.175	-0.828	1.00	19.55	N
	ATOM	2557	N	MET	A	337	-6.575	15.748	4.886	1.00	16.42	N
35	ATOM	2558	CA	MET	A	337	-7.510	15.368	5.919	1.00	15.57	C
	ATOM	2559	C	MET	A	337	-7.844	16.517	6.861	1.00	19.15	C
	ATOM	2560	O	MET	A	337	-8.997	16.828	7.214	1.00	17.09	O
	ATOM	2561	CB	MET	A	337	-7.029	14.130	6.691	1.00	12.96	C
	ATOM	2562	CG	MET	A	337	-7.841	13.856	7.949	1.00	13.77	C
40	ATOM	2563	SD	MET	A	337	-7.030	12.851	9.216	1.00	17.79	S
	ATOM	2564	CE	MET	A	337	-5.797	14.064	9.728	1.00	15.11	C
	ATOM	2565	N	LEU	A	338	-6.791	17.252	7.292	1.00	17.12	N
	ATOM	2566	CA	LEU	A	338	-7.037	18.360	8.215	1.00	13.22	C
	ATOM	2567	C	LEU	A	338	-7.920	19.420	7.512	1.00	12.62	C
45	ATOM	2568	O	LEU	A	338	-8.692	20.078	8.208	1.00	16.09	O
	ATOM	2569	CB	LEU	A	338	-5.750	19.033	8.672	1.00	12.72	C
	ATOM	2570	CG	LEU	A	338	-4.854	18.184	9.613	1.00	12.16	C
	ATOM	2571	CD1	LEU	A	338	-3.504	18.883	9.684	1.00	14.66	C
	ATOM	2572	CD2	LEU	A	338	-5.481	17.933	10.963	1.00	14.99	C
50	ATOM	2573	N	THR	A	339	-7.762	19.530	6.207	1.00	15.20	N
	ATOM	2574	CA	THR	A	339	-8.517	20.549	5.466	1.00	14.07	C
	ATOM	2575	C	THR	A	339	-9.973	20.127	5.340	1.00	17.40	C
	ATOM	2576	O	THR	A	339	-10.853	20.895	5.693	1.00	16.52	O
	ATOM	2577	CB	THR	A	339	-7.925	20.705	4.064	1.00	14.09	C
55	ATOM	2578	OG1	THR	A	339	-6.543	21.106	4.095	1.00	17.23	O
	ATOM	2579	CG2	THR	A	339	-8.676	21.807	3.307	1.00	15.79	C
	ATOM	2580	N	GLN	A	340	-10.209	18.932	4.816	1.00	17.13	N
	ATOM	2581	CA	GLN	A	340	-11.600	18.444	4.763	1.00	18.38	C
	ATOM	2582	C	GLN	A	340	-12.301	18.472	6.108	1.00	21.25	C

	ATOM	2583	O	GLN	A	340	-13.537	18.629	6.155	1.00 21.95	O
	ATOM	2584	CB	GLN	A	340	-11.617	16.996	4.243	1.00 19.29	C
	ATOM	2585	CG	GLN	A	340	-10.990	16.788	2.898	1.00 20.15	C
	ATOM	2586	CD	GLN	A	340	-10.844	15.347	2.464	1.00 39.34	C
5	ATOM	2587	OE1	GLN	A	340	-11.666	14.856	1.695	1.00 48.75	O
	ATOM	2588	NE2	GLN	A	340	-9.811	14.662	2.941	1.00 41.51	N
	ATOM	2589	N	ASN	A	341	-11.648	18.269	7.254	1.00 16.74	N
	ATOM	2590	CA	ASN	A	341	-12.266	18.284	8.571	1.00 17.02	C
	ATOM	2591	C	ASN	A	341	-12.058	19.597	9.323	1.00 14.87	C
10	ATOM	2592	O	ASN	A	341	-12.344	19.646	10.530	1.00 16.75	O
	ATOM	2593	CB	ASN	A	341	-11.733	17.147	9.439	1.00 20.22	C
	ATOM	2594	CG	ASN	A	341	-12.196	15.814	8.876	1.00 29.67	C
	ATOM	2595	OD1	ASN	A	341	-13.358	15.425	9.026	1.00 27.00	O
	ATOM	2596	ND2	ASN	A	341	-11.285	15.111	8.228	1.00 27.87	N
15	ATOM	2597	N	ALA	A	342	-11.655	20.620	8.570	1.00 15.69	N
	ATOM	2598	CA	ALA	A	342	-11.376	21.899	9.250	1.00 16.57	C
	ATOM	2599	C	ALA	A	342	-12.564	22.549	9.947	1.00 15.33	C
	ATOM	2600	O	ALA	A	342	-13.726	22.421	9.579	1.00 17.77	O
	ATOM	2601	CB	ALA	A	342	-10.770	22.898	8.286	1.00 16.11	C
20	ATOM	2602	N	HIS	A	343	-12.166	23.352	10.924	1.00 15.51	N
	ATOM	2603	CA	HIS	A	343	-13.073	24.222	11.681	1.00 17.62	C
	ATOM	2604	C	HIS	A	343	-13.823	25.077	10.667	1.00 15.64	C
	ATOM	2605	O	HIS	A	343	-13.259	25.492	9.663	1.00 17.37	O
	ATOM	2606	CB	HIS	A	343	-12.241	25.177	12.540	1.00 20.31	C
25	ATOM	2607	CG	HIS	A	343	-13.053	25.933	13.534	1.00 19.46	C
	ATOM	2608	ND1	HIS	A	343	-13.707	27.108	13.227	1.00 19.05	N
	ATOM	2609	CD2	HIS	A	343	-13.310	25.671	14.840	1.00 20.32	C
	ATOM	2610	CE1	HIS	A	343	-14.338	27.522	14.319	1.00 19.65	C
	ATOM	2611	NE2	HIS	A	343	-14.098	26.687	15.323	1.00 18.29	N
30	ATOM	2612	N	ASP	A	344	-15.103	25.337	11.008	1.00 18.61	N
	ATOM	2613	CA	ASP	A	344	-15.950	26.127	10.114	1.00 20.83	C
	ATOM	2614	C	ASP	A	344	-15.454	27.497	9.712	1.00 18.50	C
	ATOM	2615	O	ASP	A	344	-15.776	28.009	8.617	1.00 19.65	O
	ATOM	2616	CB	ASP	A	344	-17.319	26.381	10.775	1.00 25.00	C
35	ATOM	2617	CG	ASP	A	344	-18.236	25.186	10.782	1.00 34.89	C
	ATOM	2618	OD1	ASP	A	344	-17.973	24.200	10.064	1.00 34.92	O
	ATOM	2619	OD2	ASP	A	344	-19.239	25.245	11.525	1.00 39.34	O
	ATOM	2620	N	GLU	A	345	-14.615	28.169	10.499	1.00 19.67	N
	ATOM	2621	CA	GLU	A	345	-14.047	29.439	10.063	1.00 22.09	C
40	ATOM	2622	C	GLU	A	345	-13.243	29.344	8.768	1.00 16.48	C
	ATOM	2623	O	GLU	A	345	-13.207	30.294	7.988	1.00 20.11	O
	ATOM	2624	CB	GLU	A	345	-13.182	30.059	11.183	1.00 21.92	C
	ATOM	2625	CG	GLU	A	345	-14.086	30.236	12.402	1.00 35.84	C
	ATOM	2626	CD	GLU	A	345	-13.699	31.384	13.305	1.00 41.79	C
45	ATOM	2627	OE1	GLU	A	345	-12.517	31.778	13.290	1.00 36.10	O
	ATOM	2628	OE2	GLU	A	345	-14.612	31.865	14.006	1.00 48.99	O
	ATOM	2629	N	ILE	A	346	-12.591	28.208	8.483	1.00 15.60	N
	ATOM	2630	CA	ILE	A	346	-11.750	28.048	7.307	1.00 15.20	C
	ATOM	2631	C	ILE	A	346	-12.598	27.728	6.083	1.00 16.62	C
50	ATOM	2632	O	ILE	A	346	-13.272	26.691	6.039	1.00 17.87	O
	ATOM	2633	CB	ILE	A	346	-10.755	26.878	7.551	1.00 17.64	C
	ATOM	2634	CG1	ILE	A	346	-9.853	27.349	8.700	1.00 18.77	C
	ATOM	2635	CG2	ILE	A	346	-9.930	26.542	6.323	1.00 16.36	C
	ATOM	2636	CD1	ILE	A	346	-9.204	26.204	9.476	1.00 17.77	C
55	ATOM	2637	N	ALA	A	347	-12.535	28.650	5.137	1.00 18.51	N
	ATOM	2638	CA	ALA	A	347	-13.315	28.522	3.902	1.00 19.06	C
	ATOM	2639	C	ALA	A	347	-12.714	29.367	2.772	1.00 22.31	C
	ATOM	2640	O	ALA	A	347	-12.227	30.448	3.199	1.00 20.04	O
	ATOM	2641	CB	ALA	A	347	-14.730	29.018	4.179	1.00 23.68	C

	ATOM	2642	N	GLY	B	3	103.122	49.891	57.804	1.00	33.72		N
	ATOM	2643	CA	GLY	B	3	102.929	51.013	56.900	1.00	37.30		C
	ATOM	2644	C	GLY	B	3	101.701	50.803	56.016	1.00	27.78		C
	ATOM	2645	O	GLY	B	3	101.105	49.740	55.924	1.00	26.94		O
5	ATOM	2646	N	ASN	B	4	101.361	51.854	55.290	1.00	25.02		N
	ATOM	2647	CA	ASN	B	4	100.206	51.840	54.362	1.00	24.16		C
	ATOM	2648	C	ASN	B	4	100.539	51.062	53.114	1.00	24.20		C
	ATOM	2649	O	ASN	B	4	101.457	51.312	52.321	1.00	23.81		O
	ATOM	2650	CB	ASN	B	4	99.927	53.330	54.110	1.00	21.34		C
10	ATOM	2651	CG	ASN	B	4	98.845	53.603	53.108	1.00	18.32		C
	ATOM	2652	OD1	ASN	B	4	98.145	52.680	52.633	1.00	21.01		O
	ATOM	2653	ND2	ASN	B	4	98.670	54.870	52.732	1.00	23.62		N
	ATOM	2654	N	PRO	B	5	99.752	50.008	52.818	1.00	23.45		N
	ATOM	2655	CA	PRO	B	5	99.932	49.151	51.683	1.00	24.15		C
15	ATOM	2656	C	PRO	B	5	99.726	49.772	50.330	1.00	19.72		C
	ATOM	2657	O	PRO	B	5	100.062	49.190	49.307	1.00	22.93		O
	ATOM	2658	CB	PRO	B	5	98.966	47.952	51.875	1.00	23.21		C
	ATOM	2659	CG	PRO	B	5	97.901	48.595	52.725	1.00	27.26		C
	ATOM	2660	CD	PRO	B	5	98.585	49.633	53.628	1.00	23.90		C
20	ATOM	2661	N	PHE	B	6	99.082	50.954	50.275	1.00	22.55		N
	ATOM	2662	CA	PHE	B	6	98.818	51.618	49.018	1.00	22.78		C
	ATOM	2663	C	PHE	B	6	99.917	52.630	48.660	1.00	21.92		C
	ATOM	2664	O	PHE	B	6	100.009	53.070	47.530	1.00	22.74		O
	ATOM	2665	CB	PHE	B	6	97.491	52.382	49.197	1.00	22.52		C
25	ATOM	2666	CG	PHE	B	6	96.277	51.475	49.205	1.00	18.54		C
	ATOM	2667	CD1	PHE	B	6	95.697	51.154	47.985	1.00	18.88		C
	ATOM	2668	CD2	PHE	B	6	95.782	50.982	50.380	1.00	18.39		C
	ATOM	2669	CE1	PHE	B	6	94.573	50.328	47.949	1.00	19.90		C
	ATOM	2670	CE2	PHE	B	6	94.657	50.143	50.361	1.00	18.61		C
30	ATOM	2671	CZ	PHE	B	6	94.093	49.845	49.141	1.00	16.10		C
	ATOM	2672	N	SER	B	7	100.716	52.943	49.665	1.00	24.78		N
	ATOM	2673	CA	SER	B	7	101.800	53.926	49.472	1.00	27.38		C
	ATOM	2674	C	SER	B	7	102.702	53.477	48.327	1.00	25.04		C
	ATOM	2675	O	SER	B	7	103.250	52.365	48.263	1.00	29.27		O
35	ATOM	2676	CB	SER	B	7	102.550	54.137	50.776	1.00	30.87		C
	ATOM	2677	OG	SER	B	7	103.739	54.880	50.521	1.00	37.92		O
	ATOM	2678	N	GLY	B	8	102.794	54.334	47.312	1.00	28.72		N
	ATOM	2679	CA	GLY	B	8	103.560	54.109	46.121	1.00	26.32		C
	ATOM	2680	C	GLY	B	8	103.077	53.121	45.096	1.00	28.15		C
40	ATOM	2681	O	GLY	B	8	103.742	52.785	44.120	1.00	26.94		O
	ATOM	2682	N	ARG	B	9	101.841	52.650	45.259	1.00	26.95		N
	ATOM	2683	CA	ARG	B	9	101.181	51.735	44.362	1.00	28.04		C
	ATOM	2684	C	ARG	B	9	99.972	52.375	43.668	1.00	22.76		C
	ATOM	2685	O	ARG	B	9	99.538	53.452	44.037	1.00	21.72		O
45	ATOM	2686	CB	ARG	B	9	100.738	50.492	45.161	1.00	24.98		C
	ATOM	2687	CG	ARG	B	9	101.954	49.691	45.639	1.00	31.04		C
	ATOM	2688	CD	ARG	B	9	101.592	48.439	46.392	1.00	26.45		C
	ATOM	2689	NE	ARG	B	9	102.739	47.573	46.687	1.00	34.70		N
	ATOM	2690	CZ	ARG	B	9	103.129	47.266	47.922	1.00	39.40		C
50	ATOM	2691	NH1	ARG	B	9	102.497	47.728	48.993	1.00	40.64		N
	ATOM	2692	NH2	ARG	B	9	104.182	46.475	48.156	1.00	38.19		N
	ATOM	2693	N	THR	B	10	99.545	51.709	42.607	1.00	29.44		N
	ATOM	2694	CA	THR	B	10	98.378	52.151	41.854	1.00	23.64		C
	ATOM	2695	C	THR	B	10	97.303	51.088	42.118	1.00	27.59		C
55	ATOM	2696	O	THR	B	10	97.648	49.914	42.291	1.00	23.93		O
	ATOM	2697	CB	THR	B	10	98.632	52.288	40.348	1.00	25.71		C
	ATOM	2698	OG1	THR	B	10	99.474	51.229	39.879	1.00	31.15		O
	ATOM	2699	CG2	THR	B	10	99.297	53.629	40.037	1.00	33.46		C
	ATOM	2700	N	LEU	B	11	96.082	51.548	42.339	1.00	23.03		N

	ATOM	2701	CA	LEU	B	11	94.945	50.621	42.493	1.00	18.79	C
	ATOM	2702	C	LEU	B	11	94.659	50.101	41.095	1.00	14.75	C
	ATOM	2703	O	LEU	B	11	94.434	50.820	40.105	1.00	19.53	O
	ATOM	2704	CB	LEU	B	11	93.703	51.317	42.992	1.00	19.12	C
5	ATOM	2705	CG	LEU	B	11	92.446	50.438	43.132	1.00	22.71	C
	ATOM	2706	CD1	LEU	B	11	92.684	49.287	44.090	1.00	22.76	C
	ATOM	2707	CD2	LEU	B	11	91.334	51.306	43.695	1.00	23.60	C
	ATOM	2708	N	LEU	B	12	94.670	48.775	40.941	1.00	20.03	N
	ATOM	2709	CA	LEU	B	12	94.482	48.192	39.636	1.00	14.43	C
10	ATOM	2710	C	LEU	B	12	93.109	48.404	39.022	1.00	16.53	C
	ATOM	2711	O	LEU	B	12	92.075	48.340	39.716	1.00	17.06	O
	ATOM	2712	CB	LEU	B	12	94.730	46.652	39.765	1.00	18.12	C
	ATOM	2713	CG	LEU	B	12	94.712	45.939	38.405	1.00	23.15	C
	ATOM	2714	CD1	LEU	B	12	95.987	46.244	37.614	1.00	24.69	C
15	ATOM	2715	CD2	LEU	B	12	94.566	44.423	38.575	1.00	22.51	C
	ATOM	2716	N	VAL	B	13	93.076	48.695	37.729	1.00	19.62	N
	ATOM	2717	CA	VAL	B	13	91.835	48.843	36.974	1.00	19.10	C
	ATOM	2718	C	VAL	B	13	91.086	47.512	36.956	1.00	19.52	C
	ATOM	2719	O	VAL	B	13	91.709	46.440	36.878	1.00	18.73	O
20	ATOM	2720	CB	VAL	B	13	92.151	49.237	35.528	1.00	23.99	C
	ATOM	2721	CG1	VAL	B	13	91.012	49.042	34.543	1.00	23.48	C
	ATOM	2722	CG2	VAL	B	13	92.603	50.694	35.559	1.00	22.45	C
	ATOM	2723	N	ASN	B	14	89.792	47.641	37.161	1.00	16.64	N
	ATOM	2724	CA	ASN	B	14	88.902	46.462	37.078	1.00	15.44	C
25	ATOM	2725	C	ASN	B	14	88.490	46.297	35.627	1.00	18.11	C
	ATOM	2726	O	ASN	B	14	87.770	47.107	35.020	1.00	14.84	O
	ATOM	2727	CB	ASN	B	14	87.715	46.703	38.013	1.00	14.45	C
	ATOM	2728	CG	ASN	B	14	86.631	45.653	37.899	1.00	19.96	C
	ATOM	2729	OD1	ASN	B	14	86.414	45.004	36.897	1.00	15.36	O
30	ATOM	2730	ND2	ASN	B	14	85.848	45.438	38.973	1.00	18.43	N
	ATOM	2731	N	SER	B	15	89.019	45.241	34.979	1.00	17.61	N
	ATOM	2732	CA	SER	B	15	88.778	45.057	33.557	1.00	16.10	C
	ATOM	2733	C	SER	B	15	87.346	44.735	33.185	1.00	20.23	C
	ATOM	2734	O	SER	B	15	86.885	45.045	32.065	1.00	18.77	O
35	ATOM	2735	CB	SER	B	15	89.701	43.954	33.019	1.00	16.38	C
	ATOM	2736	OG	SER	B	15	89.481	42.715	33.689	1.00	20.77	O
	ATOM	2737	N	ASP	B	16	86.592	44.137	34.073	1.00	19.24	N
	ATOM	2738	CA	ASP	B	16	85.190	43.844	33.821	1.00	16.45	C
	ATOM	2739	C	ASP	B	16	84.450	45.189	33.744	1.00	17.33	C
40	ATOM	2740	O	ASP	B	16	83.692	45.492	32.828	1.00	17.87	O
	ATOM	2741	CB	ASP	B	16	84.590	42.974	34.935	1.00	20.42	C
	ATOM	2742	CG	ASP	B	16	83.077	42.890	34.869	1.00	22.12	C
	ATOM	2743	OD1	ASP	B	16	82.524	42.626	33.772	1.00	26.25	O
	ATOM	2744	OD2	ASP	B	16	82.412	43.124	35.897	1.00	23.78	O
45	ATOM	2745	N	TYR	B	17	84.652	45.986	34.804	1.00	16.40	N
	ATOM	2746	CA	TYR	B	17	84.039	47.311	34.862	1.00	15.09	C
	ATOM	2747	C	TYR	B	17	84.426	48.129	33.628	1.00	16.41	C
	ATOM	2748	O	TYR	B	17	83.594	48.788	33.016	1.00	15.14	O
	ATOM	2749	CB	TYR	B	17	84.533	48.014	36.119	1.00	12.96	C
50	ATOM	2750	CG	TYR	B	17	83.977	49.372	36.442	1.00	11.69	C
	ATOM	2751	CD1	TYR	B	17	82.630	49.681	36.177	1.00	12.39	C
	ATOM	2752	CD2	TYR	B	17	84.772	50.340	37.005	1.00	13.55	C
	ATOM	2753	CE1	TYR	B	17	82.134	50.932	36.528	1.00	11.19	C
	ATOM	2754	CE2	TYR	B	17	84.272	51.581	37.387	1.00	16.44	C
55	ATOM	2755	CZ	TYR	B	17	82.951	51.882	37.093	1.00	13.70	C
	ATOM	2756	OH	TYR	B	17	82.480	53.119	37.473	1.00	15.10	O
	ATOM	2757	N	SER	B	18	85.731	48.186	33.337	1.00	13.96	N
	ATOM	2758	CA	SER	B	18	86.225	48.933	32.189	1.00	21.06	C
	ATOM	2759	C	SER	B	18	85.520	48.551	30.898	1.00	17.15	C

ATOM	2760	O	SER	B	18	85.025	49.407	30.156	1.00	17.69	O
ATOM	2761	CB	SER	B	18	87.759	48.802	32.115	1.00	18.47	C
ATOM	2762	OG	SER	B	18	88.274	49.530	31.018	1.00	22.46	O
ATOM	2763	N	SER	B	19	85.393	47.235	30.611	1.00	16.95	N
ATOM	2764	CA	SER	B	19	84.689	46.797	29.425	1.00	14.73	C
ATOM	2765	C	SER	B	19	83.208	47.203	29.374	1.00	15.35	C
ATOM	2766	O	SER	B	19	82.698	47.600	28.333	1.00	17.71	O
ATOM	2767	CB	SER	B	19	84.740	45.281	29.224	1.00	17.05	C
ATOM	2768	OG	ASER	B	19	84.336	44.578	30.374	0.50	25.68	O
ATOM	2769	OG	BSER	B	19	86.059	44.756	29.207	0.50	13.93	O
ATOM	2770	N	LYS	B	20	82.539	47.130	30.541	1.00	17.29	N
ATOM	2771	CA	LYS	B	20	81.145	47.563	30.583	1.00	15.79	C
ATOM	2772	C	LYS	B	20	80.977	49.058	30.370	1.00	20.37	C
ATOM	2773	O	LYS	B	20	79.998	49.449	29.734	1.00	16.23	O
ATOM	2774	CB	LYS	B	20	80.437	47.108	31.865	1.00	18.21	C
ATOM	2775	CG	LYS	B	20	80.500	45.588	31.941	1.00	17.99	C
ATOM	2776	CD	LYS	B	20	79.701	44.984	33.082	1.00	20.47	C
ATOM	2777	CE	LYS	B	20	80.240	45.293	34.450	1.00	25.73	C
ATOM	2778	NZ	LYS	B	20	79.681	44.396	35.515	1.00	15.48	N
ATOM	2779	N	LEU	B	21	81.945	49.848	30.786	1.00	17.84	N
ATOM	2780	CA	LEU	B	21	81.958	51.284	30.570	1.00	14.20	C
ATOM	2781	C	LEU	B	21	82.143	51.611	29.088	1.00	16.72	C
ATOM	2782	O	LEU	B	21	81.834	52.739	28.712	1.00	16.34	O
ATOM	2783	CB	LEU	B	21	83.073	51.995	31.345	1.00	14.43	C
ATOM	2784	CG	LEU	B	21	82.776	52.173	32.845	1.00	18.41	C
ATOM	2785	CD1	LEU	B	21	84.055	52.438	33.615	1.00	17.41	C
ATOM	2786	CD2	LEU	B	21	81.749	53.281	33.062	1.00	21.73	C
ATOM	2787	N	ASP	B	22	82.479	50.650	28.231	1.00	18.10	N
ATOM	2788	CA	ASP	B	22	82.612	50.917	26.803	1.00	16.43	C
ATOM	2789	C	ASP	B	22	81.260	51.283	26.221	1.00	18.02	C
ATOM	2790	O	ASP	B	22	81.183	52.150	25.337	1.00	17.76	O
ATOM	2791	CB	ASP	B	22	83.216	49.735	26.032	1.00	14.85	C
ATOM	2792	CG	ASP	B	22	84.007	50.276	24.848	1.00	21.61	C
ATOM	2793	OD1	ASP	B	22	84.856	51.157	25.068	1.00	21.20	O
ATOM	2794	OD2	ASP	B	22	83.709	49.787	23.734	1.00	20.22	O
ATOM	2795	N	GLN	B	23	80.180	50.681	26.744	1.00	15.67	N
ATOM	2796	CA	GLN	B	23	78.834	51.047	26.331	1.00	14.85	C
ATOM	2797	C	GLN	B	23	78.552	52.514	26.610	1.00	17.57	C
ATOM	2798	O	GLN	B	23	77.967	53.225	25.786	1.00	20.19	O
ATOM	2799	CB	GLN	B	23	77.838	50.153	27.129	1.00	17.93	C
ATOM	2800	CG	GLN	B	23	76.388	50.488	26.741	1.00	16.53	C
ATOM	2801	CD	GLN	B	23	75.372	49.548	27.329	1.00	19.21	C
ATOM	2802	OE1	GLN	B	23	74.175	49.729	27.059	1.00	21.84	O
ATOM	2803	NE2	GLN	B	23	75.795	48.555	28.100	1.00	16.64	N
ATOM	2804	N	THR	B	24	79.024	53.034	27.761	1.00	15.10	N
ATOM	2805	CA	THR	B	24	78.793	54.423	28.128	1.00	17.67	C
ATOM	2806	C	THR	B	24	79.559	55.381	27.210	1.00	16.82	C
ATOM	2807	O	THR	B	24	79.033	56.425	26.808	1.00	19.08	O
ATOM	2808	CB	THR	B	24	79.235	54.676	29.587	1.00	18.56	C
ATOM	2809	OG1	THR	B	24	78.812	53.527	30.352	1.00	17.18	O
ATOM	2810	CG2	THR	B	24	78.646	55.918	30.192	1.00	16.79	C
ATOM	2811	N	ARG	B	25	80.790	54.974	26.923	1.00	17.68	N
ATOM	2812	CA	ARG	B	25	81.654	55.784	26.046	1.00	16.68	C
ATOM	2813	C	ARG	B	25	80.930	55.912	24.694	1.00	17.50	C
ATOM	2814	O	ARG	B	25	80.788	57.022	24.168	1.00	17.95	O
ATOM	2815	CB	ARG	B	25	82.984	55.049	25.833	1.00	15.96	C
ATOM	2816	CG	ARG	B	25	83.958	55.832	24.919	1.00	16.61	C
ATOM	2817	CD	ARG	B	25	85.292	55.070	24.781	1.00	20.12	C
ATOM	2818	NE	ARG	B	25	85.047	53.796	24.103	1.00	19.63	N

	ATOM	2819	CZ	ARG	B	25	84.876	53.624	22.799	1.00	21.31	C
	ATOM	2820	NH1	ARG	B	25	85.025	54.639	21.955	1.00	23.29	N
	ATOM	2821	NH2	ARG	B	25	84.594	52.426	22.306	1.00	18.01	N
	ATOM	2822	N	GLN	B	26	80.472	54.773	24.177	1.00	15.24	N
5	ATOM	2823	CA	GLN	B	26	79.753	54.727	22.912	1.00	20.13	C
	ATOM	2824	C	GLN	B	26	78.454	55.526	22.953	1.00	21.90	C
	ATOM	2825	O	GLN	B	26	78.079	56.177	21.976	1.00	19.59	O
	ATOM	2826	CB	GLN	B	26	79.452	53.293	22.449	1.00	16.49	C
	ATOM	2827	CG	GLN	B	26	80.730	52.536	22.062	1.00	19.82	C
10	ATOM	2828	CD	GLN	B	26	80.487	51.135	21.548	1.00	21.12	C
	ATOM	2829	OE1	GLN	B	26	79.563	50.862	20.790	1.00	23.63	O
	ATOM	2830	NE2	GLN	B	26	81.333	50.181	21.990	1.00	20.52	N
	ATOM	2831	N	ALA	B	27	77.719	55.483	24.078	1.00	19.85	N
	ATOM	2832	CA	ALA	B	27	76.475	56.261	24.107	1.00	17.20	C
15	ATOM	2833	C	ALA	B	27	76.798	57.746	24.065	1.00	17.74	C
	ATOM	2834	O	ALA	B	27	76.034	58.491	23.405	1.00	21.26	O
	ATOM	2835	CB	ALA	B	27	75.751	55.913	25.397	1.00	17.02	C
	ATOM	2836	N	PHE	B	28	77.814	58.219	24.767	1.00	18.68	N
	ATOM	2837	CA	PHE	B	28	78.171	59.648	24.658	1.00	17.61	C
20	ATOM	2838	C	PHE	B	28	78.571	59.970	23.210	1.00	19.64	O
	ATOM	2839	O	PHE	B	28	78.146	61.039	22.729	1.00	20.51	O
	ATOM	2840	CB	PHE	B	28	79.324	60.001	25.599	1.00	17.36	C
	ATOM	2841	CG	PHE	B	28	78.806	60.206	27.009	1.00	15.23	C
	ATOM	2842	CD1	PHE	B	28	77.849	61.155	27.289	1.00	17.88	C
25	ATOM	2843	CD2	PHE	B	28	79.338	59.462	28.049	1.00	20.22	C
	ATOM	2844	CE1	PHE	B	28	77.379	61.358	28.578	1.00	16.98	C
	ATOM	2845	CE2	PHE	B	28	78.897	59.678	29.345	1.00	15.66	C
	ATOM	2846	CZ	PHE	B	28	77.912	60.615	29.620	1.00	22.38	C
	ATOM	2847	N	LEU	B	29	79.315	59.075	22.582	1.00	19.38	N
30	ATOM	2848	CA	LEU	B	29	79.724	59.297	21.189	1.00	22.95	C
	ATOM	2849	C	LEU	B	29	78.522	59.369	20.260	1.00	25.65	C
	ATOM	2850	O	LEU	B	29	78.529	60.163	19.315	1.00	24.09	O
	ATOM	2851	CB	LEU	B	29	80.729	58.239	20.713	1.00	22.39	C
	ATOM	2852	CG	LEU	B	29	82.107	58.293	21.394	1.00	23.42	C
35	ATOM	2853	CD1	LEU	B	29	82.984	57.090	21.110	1.00	20.32	C
	ATOM	2854	CD2	LEU	B	29	82.811	59.580	20.990	1.00	22.99	C
	ATOM	2855	N	SER	B	30	77.447	58.605	20.504	1.00	21.76	N
	ATOM	2856	CA	SER	B	30	76.290	58.676	19.603	1.00	23.84	C
	ATOM	2857	C	SER	B	30	75.561	60.000	19.630	1.00	30.86	C
40	ATOM	2858	O	SER	B	30	74.799	60.289	18.694	1.00	27.94	O
	ATOM	2859	CB	SER	B	30	75.340	57.511	19.882	1.00	28.32	C
	ATOM	2860	OG	SER	B	30	74.727	57.678	21.156	1.00	24.32	O
	ATOM	2861	N	ARG	B	31	75.740	60.809	20.663	1.00	25.20	N
	ATOM	2862	CA	ARG	B	31	75.111	62.122	20.762	1.00	25.58	C
45	ATOM	2863	C	ARG	B	31	76.077	63.255	20.458	1.00	24.05	C
	ATOM	2864	O	ARG	B	31	75.808	64.405	20.746	1.00	24.27	O
	ATOM	2865	CB	ARG	B	31	74.550	62.247	22.193	1.00	23.48	C
	ATOM	2866	CG	ARG	B	31	73.450	61.195	22.340	1.00	23.60	C
	ATOM	2867	CD	ARG	B	31	72.572	61.452	23.533	1.00	26.31	C
50	ATOM	2868	NE	ARG	B	31	73.241	61.792	24.778	1.00	30.79	N
	ATOM	2869	CZ	ARG	B	31	73.602	60.915	25.704	1.00	34.02	C
	ATOM	2870	NH1	ARG	B	31	73.374	59.634	25.507	1.00	21.49	N
	ATOM	2871	NH2	ARG	B	31	74.193	61.322	26.822	1.00	35.78	N
	ATOM	2872	N	GLY	B	32	77.267	62.900	19.959	1.00	27.50	N
55	ATOM	2873	CA	GLY	B	32	78.297	63.906	19.677	1.00	27.73	C
	ATOM	2874	C	GLY	B	32	78.864	64.523	20.950	1.00	26.07	C
	ATOM	2875	O	GLY	B	32	79.424	65.625	20.952	1.00	24.79	O
	ATOM	2876	N	ASP	B	33	78.739	63.780	22.072	1.00	21.51	N
	ATOM	2877	CA	ASP	B	33	79.272	64.322	23.326	1.00	17.26	C

	ATOM	2878	C	ASP	B	33	80.671	63.782	23.531	1.00 23.38	C
	ATOM	2879	O	ASP	B	33	80.962	62.783	24.197	1.00 20.23	O
	ATOM	2880	CB	ASP	B	33	78.371	63.893	24.506	1.00 18.03	C
	ATOM	2881	CG	ASP	B	33	78.755	64.589	25.799	1.00 23.16	C
5	ATOM	2882	OD1	ASP	B	33	79.847	65.168	25.886	1.00 17.12	O
	ATOM	2883	OD2	ASP	B	33	77.919	64.566	26.743	1.00 21.92	O
	ATOM	2884	N	GLN	B	34	81.642	64.453	22.890	1.00 18.68	N
	ATOM	2885	CA	GLN	B	34	83.032	64.085	22.980	1.00 17.11	C
	ATOM	2886	C	GLN	B	34	83.617	64.292	24.378	1.00 16.67	C
10	ATOM	2887	O	GLN	B	34	84.465	63.483	24.770	1.00 18.63	O
	ATOM	2888	CB	GLN	B	34	83.892	64.916	22.005	1.00 21.52	C
	ATOM	2889	CG	GLN	B	34	83.495	64.774	20.561	1.00 25.49	C
	ATOM	2890	CD	GLN	B	34	83.557	63.381	19.996	1.00 32.14	C
	ATOM	2891	OE1	GLN	B	34	84.375	62.547	20.371	1.00 25.68	O
15	ATOM	2892	NE2	GLN	B	34	82.683	63.054	19.052	1.00 34.50	N
	ATOM	2893	N	THR	B	35	83.262	65.383	25.040	1.00 16.15	N
	ATOM	2894	CA	THR	B	35	83.786	65.638	26.390	1.00 18.33	C
	ATOM	2895	C	THR	B	35	83.466	64.467	27.333	1.00 17.28	C
	ATOM	2896	O	THR	B	35	84.391	63.927	27.942	1.00 18.52	O
20	ATOM	2897	CB	THR	B	35	83.192	66.937	26.953	1.00 20.49	C
	ATOM	2898	OG1	THR	B	35	83.582	68.016	26.080	1.00 18.80	O
	ATOM	2899	CG2	THR	B	35	83.729	67.268	28.329	1.00 22.79	C
	ATOM	2900	N	ASN	B	36	82.220	64.022	27.361	1.00 18.47	N
	ATOM	2901	CA	ASN	B	36	81.889	62.914	28.274	1.00 16.82	C
25	ATOM	2902	C	ASN	B	36	82.424	61.593	27.770	1.00 18.94	C
	ATOM	2903	O	ASN	B	36	82.865	60.768	28.585	1.00 18.04	O
	ATOM	2904	CB	ASN	B	36	80.404	62.893	28.637	1.00 15.49	C
	ATOM	2905	CG	ASN	B	36	80.105	63.991	29.652	1.00 18.24	C
	ATOM	2906	OD1	ASN	B	36	80.760	64.136	30.689	1.00 21.37	O
30	ATOM	2907	ND2	ASN	B	36	79.061	64.787	29.393	1.00 17.27	N
	ATOM	2908	N	ALA	B	37	82.450	61.357	26.455	1.00 16.55	N
	ATOM	2909	CA	ALA	B	37	83.035	60.129	25.929	1.00 12.94	C
	ATOM	2910	C	ALA	B	37	84.479	60.003	26.404	1.00 19.48	C
	ATOM	2911	O	ALA	B	37	84.887	58.931	26.854	1.00 16.36	O
35	ATOM	2912	CB	ALA	B	37	83.006	60.113	24.395	1.00 17.12	C
	ATOM	2913	N	ALA	B	38	85.254	61.082	26.287	1.00 19.45	N
	ATOM	2914	CA	ALA	B	38	86.647	61.049	26.736	1.00 17.62	C
	ATOM	2915	C	ALA	B	38	86.763	60.821	28.234	1.00 16.35	C
	ATOM	2916	O	ALA	B	38	87.642	60.068	28.688	1.00 19.97	O
40	ATOM	2917	CB	ALA	B	38	87.338	62.347	26.340	1.00 15.26	C
	ATOM	2918	N	LYS	B	39	85.895	61.385	29.084	1.00 14.88	N
	ATOM	2919	CA	LYS	B	39	85.901	61.135	30.520	1.00 15.65	C
	ATOM	2920	C	LYS	B	39	85.664	59.647	30.810	1.00 15.04	C
	ATOM	2921	O	LYS	B	39	86.327	59.029	31.670	1.00 17.25	O
45	ATOM	2922	CB	LYS	B	39	84.797	61.963	31.195	1.00 13.01	C
	ATOM	2923	CG	LYS	B	39	85.152	63.436	31.336	1.00 16.07	C
	ATOM	2924	CD	LYS	B	39	83.981	64.250	31.914	1.00 17.28	C
	ATOM	2925	CE	LYS	B	39	84.457	65.717	31.963	1.00 23.58	C
	ATOM	2926	NZ	LYS	B	39	83.694	66.512	32.953	1.00 22.14	N
50	ATOM	2927	N	VAL	B	40	84.767	59.013	30.031	1.00 16.86	N
	ATOM	2928	CA	VAL	B	40	84.549	57.570	30.256	1.00 15.40	C
	ATOM	2929	C	VAL	B	40	85.834	56.788	29.935	1.00 19.13	C
	ATOM	2930	O	VAL	B	40	86.232	55.883	30.659	1.00 17.59	O
	ATOM	2931	CB	VAL	B	40	83.418	56.974	29.421	1.00 14.63	C
55	ATOM	2932	CG1	VAL	B	40	83.327	55.444	29.573	1.00 18.22	C
	ATOM	2933	CG2	VAL	B	40	82.066	57.551	29.814	1.00 16.24	C
	ATOM	2934	N	LYS	B	41	86.465	57.134	28.806	1.00 17.77	N
	ATOM	2935	CA	LYS	B	41	87.713	56.435	28.415	1.00 17.35	C
	ATOM	2936	C	LYS	B	41	88.782	56.611	29.461	1.00 17.10	C

	ATOM	2937	O	LYS	B	41	89.558	55.679	29.761	1.00	16.37		O
	ATOM	2938	CB	LYS	B	41	88.091	56.942	27.004	1.00	15.63		C
	ATOM	2939	CG	LYS	B	41	89.337	56.336	26.374	1.00	16.16		C
	ATOM	2940	CD	LYS	B	41	89.330	56.705	24.910	1.00	20.47		C
5	ATOM	2941	CE	LYS	B	41	90.499	56.198	24.097	1.00	32.61		C
	ATOM	2942	NZ	LYS	B	41	91.783	56.437	24.797	1.00	25.93		N
	ATOM	2943	N	TYR	B	42	88.895	57.790	30.084	1.00	15.00		N
	ATOM	2944	CA	TYR	B	42	89.826	57.980	31.171	1.00	19.39		C
	ATOM	2945	C	TYR	B	42	89.511	56.996	32.293	1.00	18.06		C
10	ATOM	2946	O	TYR	B	42	90.402	56.343	32.806	1.00	15.47		O
	ATOM	2947	CB	TYR	B	42	89.780	59.402	31.721	1.00	19.03		C
	ATOM	2948	CG	TYR	B	42	90.687	59.655	32.903	1.00	21.12		C
	ATOM	2949	CD1	TYR	B	42	92.000	60.061	32.704	1.00	20.08		C
	ATOM	2950	CD2	TYR	B	42	90.259	59.467	34.208	1.00	18.89		C
15	ATOM	2951	CE1	TYR	B	42	92.845	60.265	33.780	1.00	21.84		C
	ATOM	2952	CE2	TYR	B	42	91.083	59.685	35.292	1.00	21.59		C
	ATOM	2953	CZ	TYR	B	42	92.386	60.079	35.060	1.00	25.44		C
	ATOM	2954	OH	TYR	B	42	93.258	60.300	36.103	1.00	28.09		O
	ATOM	2955	N	VAL	B	43	88.222	56.872	32.660	1.00	16.57		N
20	ATOM	2956	CA	VAL	B	43	87.924	55.927	33.751	1.00	17.22		C
	ATOM	2957	C	VAL	B	43	88.268	54.492	33.369	1.00	18.41		C
	ATOM	2958	O	VAL	B	43	88.787	53.694	34.173	1.00	19.16		O
	ATOM	2959	CB	VAL	B	43	86.443	56.066	34.123	1.00	15.91		C
	ATOM	2960	CG1	VAL	B	43	86.060	55.029	35.183	1.00	15.52		C
25	ATOM	2961	CG2	VAL	B	43	86.229	57.462	34.671	1.00	15.11		C
	ATOM	2962	N	GLN	B	44	88.045	54.148	32.127	1.00	16.42		N
	ATOM	2963	CA	GLN	B	44	88.324	52.852	31.572	1.00	14.39		C
	ATOM	2964	C	GLN	B	44	89.799	52.482	31.679	1.00	16.33		C
	ATOM	2965	O	GLN	B	44	90.153	51.337	31.946	1.00	18.86		O
30	ATOM	2966	CB	GLN	B	44	87.958	52.831	30.087	1.00	14.26		C
	ATOM	2967	CG	GLN	B	44	86.486	52.590	29.827	1.00	17.37		C
	ATOM	2968	CD	GLN	B	44	86.197	52.495	28.344	1.00	17.65		C
	ATOM	2969	OE1	GLN	B	44	86.357	53.467	27.614	1.00	17.67		O
	ATOM	2970	NE2	GLN	B	44	85.749	51.319	27.909	1.00	18.10		N
35	ATOM	2971	N	GLU	B	45	90.666	53.451	31.406	1.00	18.18		N
	ATOM	2972	CA	GLU	B	45	92.090	53.186	31.389	1.00	18.82		C
	ATOM	2973	C	GLU	B	45	92.866	53.515	32.636	1.00	20.67		C
	ATOM	2974	O	GLU	B	45	93.924	52.875	32.827	1.00	19.61		O
	ATOM	2975	CB	GLU	B	45	92.673	54.042	30.215	1.00	17.98		C
40	ATOM	2976	CG	GLU	B	45	92.159	53.564	28.877	1.00	18.26		C
	ATOM	2977	CD	GLU	B	45	92.554	54.418	27.674	1.00	24.06		C
	ATOM	2978	OE1	GLU	B	45	93.130	55.502	27.863	1.00	30.46		O
	ATOM	2979	OE2	GLU	B	45	92.205	53.983	26.560	1.00	29.87		O
	ATOM	2980	N	LYS	B	46	92.454	54.525	33.414	1.00	15.25		N
45	ATOM	2981	CA	LYS	B	46	93.260	55.020	34.515	1.00	18.10		C
	ATOM	2982	C	LYS	B	46	92.736	54.996	35.926	1.00	20.90		C
	ATOM	2983	O	LYS	B	46	93.491	55.354	36.841	1.00	23.35		O
	ATOM	2984	CB	LYS	B	46	93.611	56.497	34.178	1.00	22.72		C
	ATOM	2985	CG	LYS	B	46	94.615	56.617	33.044	1.00	30.17		C
50	ATOM	2986	CD	LYS	B	46	94.268	57.636	31.994	1.00	38.77		C
	ATOM	2987	CE	LYS	B	46	95.380	57.862	30.984	1.00	43.17		C
	ATOM	2988	NZ	LYS	B	46	94.911	58.643	29.800	1.00	37.54		N
	ATOM	2989	N	VAL	B	47	91.489	54.630	36.166	1.00	17.52		N
	ATOM	2990	CA	VAL	B	47	90.884	54.655	37.490	1.00	16.01		C
55	ATOM	2991	C	VAL	B	47	90.772	53.239	38.066	1.00	14.36		C
	ATOM	2992	O	VAL	B	47	90.044	52.459	37.492	1.00	18.15		O
	ATOM	2993	CB	VAL	B	47	89.506	55.334	37.430	1.00	15.12		C
	ATOM	2994	CG1	VAL	B	47	88.909	55.406	38.832	1.00	16.31		C
	ATOM	2995	CG2	VAL	B	47	89.727	56.780	36.937	1.00	19.69		C

	ATOM	2996	N	GLY	B	48	91.503	52.943	39.131	1.00	16.55	N
	ATOM	2997	CA	GLY	B	48	91.387	51.585	39.695	1.00	19.29	C
	ATOM	2998	C	GLY	B	48	90.043	51.399	40.401	1.00	18.66	C
	ATOM	2999	O	GLY	B	48	89.530	52.341	40.986	1.00	14.72	O
5	ATOM	3000	N	THR	B	49	89.494	50.198	40.339	1.00	16.12	N
	ATOM	3001	CA	THR	B	49	88.237	49.855	41.041	1.00	14.90	C
	ATOM	3002	C	THR	B	49	88.393	48.415	41.533	1.00	17.66	C
	ATOM	3003	O	THR	B	49	89.005	47.580	40.846	1.00	15.77	O
	ATOM	3004	CB	THR	B	49	87.037	49.926	40.087	1.00	17.65	C
10	ATOM	3005	OG1	THR	B	49	86.992	51.266	39.546	1.00	15.90	O
	ATOM	3006	CG2	THR	B	49	85.672	49.699	40.741	1.00	16.18	C
	ATOM	3007	N	PHE	B	50	87.760	48.147	42.674	1.00	12.91	N
	ATOM	3008	CA	PHE	B	50	87.783	46.809	43.232	1.00	12.56	C
	ATOM	3009	C	PHE	B	50	86.928	45.873	42.388	1.00	14.04	C
15	ATOM	3010	O	PHE	B	50	85.972	46.212	41.701	1.00	14.93	O
	ATOM	3011	CB	PHE	B	50	87.171	46.812	44.639	1.00	16.20	C
	ATOM	3012	CG	PHE	B	50	88.114	47.169	45.740	1.00	14.17	C
	ATOM	3013	CD1	PHE	B	50	88.834	48.355	45.750	1.00	17.64	C
	ATOM	3014	CD2	PHE	B	50	88.291	46.322	46.824	1.00	17.20	C
20	ATOM	3015	CE1	PHE	B	50	89.697	48.670	46.788	1.00	17.52	C
	ATOM	3016	CE2	PHE	B	50	89.168	46.599	47.857	1.00	20.19	C
	ATOM	3017	CZ	PHE	B	50	89.882	47.785	47.844	1.00	17.21	C
	ATOM	3018	N	TYR	B	51	87.373	44.606	42.445	1.00	14.41	N
	ATOM	3019	CA	TYR	B	51	86.674	43.510	41.828	1.00	13.73	C
25	ATOM	3020	C	TYR	B	51	85.790	42.829	42.877	1.00	14.03	C
	ATOM	3021	O	TYR	B	51	86.288	42.466	43.930	1.00	15.34	O
	ATOM	3022	CB	TYR	B	51	87.646	42.442	41.381	1.00	12.64	C
	ATOM	3023	CG	TYR	B	51	88.506	42.798	40.204	1.00	13.85	C
	ATOM	3024	CD1	TYR	B	51	89.572	43.690	40.443	1.00	15.01	C
30	ATOM	3025	CD2	TYR	B	51	88.330	42.263	38.939	1.00	15.30	C
	ATOM	3026	CE1	TYR	B	51	90.434	44.011	39.409	1.00	17.70	C
	ATOM	3027	CE2	TYR	B	51	89.183	42.587	37.887	1.00	18.70	C
	ATOM	3028	CZ	TYR	B	51	90.209	43.475	38.170	1.00	15.33	C
	ATOM	3029	OH	TYR	B	51	91.095	43.819	37.155	1.00	16.64	O
35	ATOM	3030	N	TRP	B	52	84.484	42.728	42.594	1.00	11.83	N
	ATOM	3031	CA	TRP	B	52	83.585	42.122	43.579	1.00	12.69	C
	ATOM	3032	C	TRP	B	52	83.409	40.620	43.379	1.00	14.01	C
	ATOM	3033	O	TRP	B	52	83.018	40.188	42.279	1.00	14.38	O
	ATOM	3034	CB	TRP	B	52	82.193	42.751	43.450	1.00	14.32	C
40	ATOM	3035	CG	TRP	B	52	82.162	44.154	43.985	1.00	14.78	C
	ATOM	3036	CD1	TRP	B	52	82.825	45.261	43.503	1.00	17.01	C
	ATOM	3037	CD2	TRP	B	52	81.431	44.580	45.136	1.00	10.23	C
	ATOM	3038	NE1	TRP	B	52	82.527	46.344	44.300	1.00	12.92	N
	ATOM	3039	CE2	TRP	B	52	81.691	45.947	45.313	1.00	11.33	C
45	ATOM	3040	CE3	TRP	B	52	80.575	43.916	46.032	1.00	13.21	C
	ATOM	3041	CZ2	TRP	B	52	81.101	46.657	46.346	1.00	14.79	C
	ATOM	3042	CZ3	TRP	B	52	79.982	44.607	47.073	1.00	11.88	C
	ATOM	3043	CH2	TRP	B	52	80.254	45.988	47.191	1.00	14.19	C
	ATOM	3044	N	ILE	B	53	83.794	39.876	44.423	1.00	11.74	N
50	ATOM	3045	CA	ILE	B	53	83.692	38.397	44.302	1.00	14.76	C
	ATOM	3046	C	ILE	B	53	82.428	38.000	45.018	1.00	11.18	C
	ATOM	3047	O	ILE	B	53	82.357	37.517	46.150	1.00	13.16	O
	ATOM	3048	CB	ILE	B	53	84.928	37.720	44.892	1.00	16.03	C
	ATOM	3049	CG1	ILE	B	53	86.217	38.340	44.377	1.00	11.84	C
55	ATOM	3050	CG2	ILE	B	53	84.912	36.226	44.483	1.00	15.36	C
	ATOM	3051	CD1	ILE	B	53	86.356	38.462	42.856	1.00	14.62	C
	ATOM	3052	N	SER	B	54	81.294	38.352	44.344	1.00	15.26	N
	ATOM	3053	CA	SER	B	54	79.995	38.297	45.007	1.00	17.10	C
	ATOM	3054	C	SER	B	54	79.253	36.975	45.018	1.00	12.48	C

	ATOM	3055	O	SER B	54	78.137	36.937	45.535	1.00	14.16		O
	ATOM	3056	CB	SER B	54	79.088	39.388	44.431	1.00	17.50		C
	ATOM	3057	OG	ASER B	54	79.760	40.633	44.392	0.50	14.39		O
	ATOM	3058	OG	BSER B	54	78.982	39.340	43.029	0.50	11.72		O
5	ATOM	3059	N	ASN B	55	79.855	35.944	44.435	1.00	12.63		N
	ATOM	3060	CA	ASN B	55	79.276	34.607	44.451	1.00	13.77		C
	ATOM	3061	C	ASN B	55	80.417	33.640	44.177	1.00	18.96		C
	ATOM	3062	O	ASN B	55	81.551	34.064	43.897	1.00	15.24		O
	ATOM	3063	CB	ASN B	55	78.063	34.514	43.523	1.00	10.44		C
10	ATOM	3064	CG	ASN B	55	78.380	34.867	42.080	1.00	15.09		C
	ATOM	3065	OD1	ASN B	55	79.345	34.340	41.549	1.00	15.91		O
	ATOM	3066	ND2	ASN B	55	77.637	35.804	41.488	1.00	17.05		N
	ATOM	3067	N	ILE B	56	80.140	32.340	44.256	1.00	14.37		N
	ATOM	3068	CA	ILE B	56	81.168	31.330	44.010	1.00	12.05		C
15	ATOM	3069	C	ILE B	56	81.582	31.291	42.553	1.00	15.02		C
	ATOM	3070	O	ILE B	56	82.787	31.241	42.259	1.00	16.51		O
	ATOM	3071	CB	ILE B	56	80.609	29.989	44.520	1.00	13.92		C
	ATOM	3072	CG1	ILE B	56	80.647	29.953	46.060	1.00	14.27		C
	ATOM	3073	CG2	ILE B	56	81.303	28.780	43.946	1.00	13.39		C
20	ATOM	3074	CD1	ILE B	56	79.734	28.896	46.661	1.00	18.34		C
	ATOM	3075	N	PHE B	57	80.670	31.496	41.607	1.00	12.96		N
	ATOM	3076	CA	PHE B	57	81.087	31.527	40.187	1.00	11.15		C
	ATOM	3077	C	PHE B	57	82.144	32.597	39.972	1.00	18.24		C
	ATOM	3078	O	PHE B	57	83.073	32.351	39.185	1.00	14.89		O
25	ATOM	3079	CB	PHE B	57	79.825	31.815	39.333	1.00	17.42		C
	ATOM	3080	CG	PHE B	57	80.111	32.010	37.873	1.00	18.10		C
	ATOM	3081	CD1	PHE B	57	80.429	33.246	37.355	1.00	16.97		C
	ATOM	3082	CD2	PHE B	57	80.052	30.934	36.994	1.00	14.67		C
	ATOM	3083	CE1	PHE B	57	80.738	33.428	36.019	1.00	19.79		C
30	ATOM	3084	CE2	PHE B	57	80.309	31.126	35.654	1.00	17.22		C
	ATOM	3085	CZ	PHE B	57	80.668	32.365	35.150	1.00	15.53		C
	ATOM	3086	N	LEU B	58	82.051	33.749	40.663	1.00	12.88		N
	ATOM	3087	CA	LEU B	58	82.941	34.882	40.453	1.00	15.64		C
	ATOM	3088	C	LEU B	58	84.292	34.713	41.117	1.00	16.65		C
35	ATOM	3089	O	LEU B	58	85.169	35.545	40.902	1.00	13.78		O
	ATOM	3090	CB	LEU B	58	82.288	36.211	40.863	1.00	14.15		C
	ATOM	3091	CG	LEU B	58	81.170	36.613	39.900	1.00	15.42		C
	ATOM	3092	CD1	LEU B	58	80.372	37.740	40.500	1.00	15.14		C
	ATOM	3093	CD2	LEU B	58	81.753	36.966	38.533	1.00	16.23		C
40	ATOM	3094	N	LEU B	59	84.493	33.550	41.768	1.00	14.14		N
	ATOM	3095	CA	LEU B	59	85.882	33.264	42.190	1.00	14.17		C
	ATOM	3096	C	LEU B	59	86.811	33.291	40.991	1.00	15.97		C
	ATOM	3097	O	LEU B	59	87.976	33.685	41.212	1.00	17.98		O
	ATOM	3098	CB	LEU B	59	85.985	31.894	42.870	1.00	12.98		C
45	ATOM	3099	CG	LEU B	59	85.333	31.756	44.252	1.00	16.55		C
	ATOM	3100	CD1	LEU B	59	85.121	30.298	44.621	1.00	19.47		C
	ATOM	3101	CD2	LEU B	59	86.193	32.475	45.310	1.00	17.68		C
	ATOM	3102	N	ARG B	60	86.369	33.070	39.762	1.00	16.56		N
	ATOM	3103	CA	ARG B	60	87.252	33.082	38.583	1.00	18.08		C
50	ATOM	3104	C	ARG B	60	87.752	34.471	38.264	1.00	20.54		C
	ATOM	3105	O	ARG B	60	88.803	34.657	37.644	1.00	20.75		O
	ATOM	3106	CB	ARG B	60	86.466	32.516	37.411	1.00	21.86		C
	ATOM	3107	CG	ARG B	60	85.219	33.309	37.020	1.00	21.71		C
	ATOM	3108	CD	ARG B	60	84.396	32.497	36.023	1.00	28.01		C
55	ATOM	3109	NE	ARG B	60	83.808	31.296	36.593	1.00	21.97		N
	ATOM	3110	CZ	ARG B	60	83.596	30.115	36.046	1.00	27.05		C
	ATOM	3111	NH1	ARG B	60	83.941	29.850	34.800	1.00	22.97		N
	ATOM	3112	NH2	ARG B	60	83.017	29.129	36.742	1.00	32.90		N
	ATOM	3113	N	ASP B	61	87.031	35.497	38.730	1.00	13.93		N

	ATOM	3114	CA	ASP	B	61	87.471	36.869	38.545	1.00 17.59	C
	ATOM	3115	C	ASP	B	61	88.704	37.179	39.381	1.00 22.52	C
	ATOM	3116	O	ASP	B	61	89.421	38.145	39.094	1.00 17.88	O
	ATOM	3117	CB	ASP	B	61	86.353	37.862	38.885	1.00 16.90	C
5	ATOM	3118	CG	ASP	B	61	85.552	38.222	37.655	1.00 24.41	C
	ATOM	3119	OD1	ASP	B	61	85.883	37.820	36.516	1.00 26.33	O
	ATOM	3120	OD2	ASP	B	61	84.560	38.958	37.845	1.00 20.11	O
	ATOM	3121	N	ILE	B	62	88.965	36.384	40.410	1.00 15.89	N
	ATOM	3122	CA	ILE	B	62	90.211	36.540	41.174	1.00 22.74	C
10	ATOM	3123	C	ILE	B	62	91.347	36.208	40.208	1.00 24.25	C
	ATOM	3124	O	ILE	B	62	92.316	37.001	40.151	1.00 20.29	O
	ATOM	3125	CB	ILE	B	62	90.245	35.700	42.458	1.00 17.44	C
	ATOM	3126	CG1	ILE	B	62	89.279	36.139	43.559	1.00 15.61	C
	ATOM	3127	CG2	ILE	B	62	91.691	35.767	43.043	1.00 16.55	C
15	ATOM	3128	CD1	ILE	B	62	88.989	35.140	44.653	1.00 21.53	C
	ATOM	3129	N	ASP	B	63	91.263	35.153	39.375	1.00 20.12	N
	ATOM	3130	CA	ASP	B	63	92.325	34.842	38.422	1.00 22.02	C
	ATOM	3131	C	ASP	B	63	92.476	35.889	37.338	1.00 28.10	C
	ATOM	3132	O	ASP	B	63	93.570	36.181	36.843	1.00 26.70	O
20	ATOM	3133	CB	ASP	B	63	92.099	33.458	37.787	1.00 26.51	C
	ATOM	3134	CG	ASP	B	63	92.012	32.385	38.855	1.00 25.59	C
	ATOM	3135	OD1	ASP	B	63	92.913	32.296	39.718	1.00 32.65	O
	ATOM	3136	OD2	ASP	B	63	91.021	31.610	38.867	1.00 26.76	O
	ATOM	3137	N	VAL	B	64	91.387	36.560	36.943	1.00 19.62	N
25	ATOM	3138	CA	VAL	B	64	91.463	37.621	35.960	1.00 18.25	C
	ATOM	3139	C	VAL	B	64	92.214	38.797	36.588	1.00 21.72	C
	ATOM	3140	O	VAL	B	64	93.012	39.409	35.887	1.00 25.35	O
	ATOM	3141	CB	VAL	B	64	90.051	38.101	35.562	1.00 25.41	C
	ATOM	3142	CG1	VAL	B	64	90.120	39.394	34.752	1.00 22.56	C
30	ATOM	3143	CG2	VAL	B	64	89.294	37.027	34.798	1.00 22.99	C
	ATOM	3144	N	ALA	B	65	91.924	39.139	37.848	1.00 18.19	N
	ATOM	3145	CA	ALA	B	65	92.546	40.304	38.485	1.00 17.64	C
	ATOM	3146	C	ALA	B	65	94.052	40.091	38.656	1.00 22.70	C
	ATOM	3147	O	ALA	B	65	94.871	40.970	38.477	1.00 23.51	O
35	ATOM	3148	CB	ALA	B	65	91.934	40.531	39.859	1.00 15.79	C
	ATOM	3149	N	ILE	B	66	94.375	38.839	38.975	1.00 21.84	N
	ATOM	3150	CA	ILE	B	66	95.781	38.440	39.170	1.00 28.23	C
	ATOM	3151	C	ILE	B	66	96.564	38.586	37.880	1.00 27.27	C
	ATOM	3152	O	ILE	B	66	97.681	39.142	37.852	1.00 25.81	O
40	ATOM	3153	CB	ILE	B	66	95.791	36.984	39.710	1.00 18.66	C
	ATOM	3154	CG1	ILE	B	66	95.610	36.997	41.200	1.00 19.19	C
	ATOM	3155	CG2	ILE	B	66	97.156	36.353	39.354	1.00 30.76	C
	ATOM	3156	CD1	ILE	B	66	95.212	35.770	41.980	1.00 22.60	C
	ATOM	3157	N	GLN	B	67	96.014	38.095	36.786	1.00 23.96	N
45	ATOM	3158	CA	GLN	B	67	96.538	38.148	35.446	1.00 26.59	C
	ATOM	3159	C	GLN	B	67	96.741	39.613	35.061	1.00 31.49	C
	ATOM	3160	O	GLN	B	67	97.813	39.964	34.573	1.00 30.87	O
	ATOM	3161	CB	GLN	B	67	95.599	37.486	34.453	1.00 30.04	C
	ATOM	3162	CG	GLN	B	67	95.974	37.661	32.987	1.00 38.09	C
50	ATOM	3163	CD	GLN	B	67	95.313	36.596	32.124	1.00 38.32	C
	ATOM	3164	OE1	GLN	B	67	94.872	35.587	32.686	1.00 44.84	O
	ATOM	3165	NE2	GLN	B	67	95.272	36.846	30.822	1.00 43.52	N
	ATOM	3166	N	ASN	B	68	95.729	40.435	35.384	1.00 26.37	N
	ATOM	3167	CA	ASN	B	68	95.856	41.857	35.070	1.00 26.18	C
55	ATOM	3168	C	ASN	B	68	96.902	42.518	35.948	1.00 24.99	C
	ATOM	3169	O	ASN	B	68	97.641	43.373	35.419	1.00 27.97	O
	ATOM	3170	CB	ASN	B	68	94.489	42.548	35.204	1.00 22.86	C
	ATOM	3171	CG	ASN	B	68	93.435	42.064	34.261	1.00 23.04	C
	ATOM	3172	OD1	ASN	B	68	93.593	41.520	33.154	1.00 24.93	O

	ATOM	3173	ND2	ASN	B	68	92.163	42.255	34.667	1.00	19.91		N
	ATOM	3174	N	ALA	B	69	97.081	42.130	37.202	1.00	24.84		N
	ATOM	3175	CA	ALA	B	69	98.108	42.702	38.062	1.00	17.02		C
	ATOM	3176	C	ALA	B	69	99.505	42.250	37.579	1.00	28.34		C
5	ATOM	3177	O	ALA	B	69	100.468	42.988	37.819	1.00	29.63		O
	ATOM	3178	CB	ALA	B	69	97.941	42.370	39.523	1.00	21.95		C
	ATOM	3179	N	ARG	B	70	99.608	41.108	36.908	1.00	28.89		N
	ATOM	3180	CA	ARG	B	70	100.912	40.675	36.369	1.00	27.69		C
	ATOM	3181	C	ARG	B	70	101.172	41.393	35.055	1.00	34.67		C
10	ATOM	3182	O	ARG	B	70	102.314	41.815	34.788	1.00	38.31		O
	ATOM	3183	CB	ARG	B	70	100.962	39.139	36.232	1.00	28.12		C
	ATOM	3184	CG	ARG	B	70	101.205	38.453	37.562	1.00	20.96		C
	ATOM	3185	CD	ARG	B	70	101.046	36.944	37.597	1.00	25.41		C
	ATOM	3186	NE	ARG	B	70	101.052	36.271	38.872	1.00	22.35		N
15	ATOM	3187	CZ	ARG	B	70	100.582	35.084	39.331	1.00	17.36		C
	ATOM	3188	NH1	ARG	B	70	99.918	34.222	38.627	1.00	29.75		N
	ATOM	3189	NH2	ARG	B	70	100.766	34.790	40.617	1.00	26.53		N
	ATOM	3190	N	ALA	B	71	100.161	41.596	34.219	1.00	30.93		N
	ATOM	3191	CA	ALA	B	71	100.294	42.318	32.968	1.00	30.96		C
20	ATOM	3192	C	ALA	B	71	100.677	43.782	33.204	1.00	37.18		C
	ATOM	3193	O	ALA	B	71	101.481	44.352	32.459	1.00	39.92		O
	ATOM	3194	CB	ALA	B	71	99.018	42.308	32.147	1.00	29.82		C
	ATOM	3195	N	ALA	B	72	100.094	44.395	34.233	1.00	32.39		N
	ATOM	3196	CA	ALA	B	72	100.363	45.798	34.516	1.00	33.17		C
25	ATOM	3197	C	ALA	B	72	101.778	45.996	35.037	1.00	37.85		C
	ATOM	3198	O	ALA	B	72	102.537	46.828	34.537	1.00	31.27		O
	ATOM	3199	CB	ALA	B	72	99.402	46.323	35.586	1.00	31.02		C
	ATOM	3200	N	LYS	B	73	102.150	45.181	36.027	1.00	36.44		N
	ATOM	3201	CA	LYS	B	73	103.486	45.309	36.615	1.00	41.38		C
30	ATOM	3202	C	LYS	B	73	104.577	44.894	35.642	1.00	38.65		C
	ATOM	3203	O	LYS	B	73	105.734	45.315	35.790	1.00	41.24		O
	ATOM	3204	CB	LYS	B	73	103.547	44.645	37.973	1.00	46.45		C
	ATOM	3205	CG	LYS	B	73	104.074	43.240	38.070	1.00	44.37		C
	ATOM	3206	CD	LYS	B	73	105.446	43.196	38.718	1.00	51.56		C
35	ATOM	3207	CE	LYS	B	73	105.404	43.638	40.174	1.00	55.82		C
	ATOM	3208	NZ	LYS	B	73	104.882	42.582	41.083	1.00	57.90		N
	ATOM	3209	N	ALA	B	74	104.258	44.186	34.569	1.00	40.93		N
	ATOM	3210	CA	ALA	B	74	105.166	43.862	33.486	1.00	44.54		C
	ATOM	3211	C	ALA	B	74	105.270	45.016	32.486	1.00	46.62		C
40	ATOM	3212	O	ALA	B	74	106.250	45.084	31.734	1.00	46.58		O
	ATOM	3213	CB	ALA	B	74	104.759	42.604	32.742	1.00	40.60		C
	ATOM	3214	N	ARG	B	75	104.321	45.956	32.501	1.00	44.45		N
	ATOM	3215	CA	ARG	B	75	104.414	47.111	31.609	1.00	43.68		C
	ATOM	3216	C	ARG	B	75	105.075	48.270	32.358	1.00	40.42		C
45	ATOM	3217	O	ARG	B	75	105.136	49.398	31.869	1.00	44.75		O
	ATOM	3218	CB	ARG	B	75	103.095	47.509	30.995	1.00	47.64		C
	ATOM	3219	CG	ARG	B	75	102.059	48.208	31.837	1.00	50.87		C
	ATOM	3220	CD	ARG	B	75	100.792	48.450	31.029	1.00	55.65		C
	ATOM	3221	NE	ARG	B	75	100.644	47.576	29.868	1.00	51.77		N
50	ATOM	3222	CZ	ARG	B	75	99.612	46.760	29.660	1.00	54.53		C
	ATOM	3223	NH1	ARG	B	75	98.626	46.716	30.555	1.00	45.97		N
	ATOM	3224	NH2	ARG	B	75	99.570	46.002	28.568	1.00	49.67		N
	ATOM	3225	N	GLY	B	76	105.608	47.960	33.530	1.00	37.48		N
	ATOM	3226	CA	GLY	B	76	106.335	48.878	34.357	1.00	38.17		C
55	ATOM	3227	C	GLY	B	76	105.619	49.433	35.566	1.00	40.99		C
	ATOM	3228	O	GLY	B	76	106.260	50.163	36.330	1.00	40.23		O
	ATOM	3229	N	GLU	B	77	104.338	49.116	35.769	1.00	39.57		N
	ATOM	3230	CA	GLU	B	77	103.619	49.694	36.910	1.00	35.86		C
	ATOM	3231	C	GLU	B	77	103.784	48.907	38.201	1.00	31.34		C

	ATOM	3232	O	GLU	B	77	104.348	47.812	38.247	1.00	34.21	O
	ATOM	3233	CB	GLU	B	77	102.148	49.842	36.527	1.00	36.57	C
	ATOM	3234	CG	GLU	B	77	101.910	50.384	35.118	1.00	32.98	C
	ATOM	3235	CD	GLU	B	77	100.472	50.184	34.691	1.00	35.04	C
5	ATOM	3236	OE1	GLU	B	77	99.679	49.697	35.529	1.00	39.41	O
	ATOM	3237	OE2	GLU	B	77	100.175	50.525	33.532	1.00	39.68	O
	ATOM	3238	N	ASN	B	78	103.270	49.434	39.300	1.00	29.74	N
	ATOM	3239	CA	ASN	B	78	103.318	48.849	40.626	1.00	33.87	C
	ATOM	3240	C	ASN	B	78	101.927	48.815	41.259	1.00	29.45	C
10	ATOM	3241	O	ASN	B	78	101.564	49.642	42.088	1.00	29.17	O
	ATOM	3242	CB	ASN	B	78	104.207	49.732	41.502	1.00	40.90	C
	ATOM	3243	CG	ASN	B	78	104.759	48.982	42.691	1.00	53.71	C
	ATOM	3244	OD1	ASN	B	78	104.943	49.534	43.779	1.00	56.49	O
	ATOM	3245	ND2	ASN	B	78	105.032	47.692	42.515	1.00	57.03	N
15	ATOM	3246	N	PRO	B	79	101.166	47.796	40.934	1.00	30.67	N
	ATOM	3247	CA	PRO	B	79	99.756	47.717	41.296	1.00	24.65	C
	ATOM	3248	C	PRO	B	79	99.415	47.064	42.601	1.00	24.32	C
	ATOM	3249	O	PRO	B	79	100.176	46.309	43.201	1.00	25.61	O
	ATOM	3250	CB	PRO	B	79	99.142	46.816	40.199	1.00	25.81	C
20	ATOM	3251	CG	PRO	B	79	100.299	45.838	40.064	1.00	27.62	C
	ATOM	3252	CD	PRO	B	79	101.529	46.745	39.972	1.00	31.59	C
	ATOM	3253	N	ILE	B	80	98.196	47.424	43.059	1.00	20.77	N
	ATOM	3254	CA	ILE	B	80	97.637	46.743	44.226	1.00	19.20	C
	ATOM	3255	C	ILE	B	80	96.211	46.367	43.762	1.00	23.06	C
25	ATOM	3256	O	ILE	B	80	95.556	47.217	43.192	1.00	20.46	O
	ATOM	3257	CB	ILE	B	80	97.649	47.484	45.527	1.00	19.08	C
	ATOM	3258	CG1	ILE	B	80	96.951	46.679	46.638	1.00	18.64	C
	ATOM	3259	CG2	ILE	B	80	96.981	48.851	45.340	1.00	23.47	C
	ATOM	3260	CD1	ILE	B	80	97.181	47.154	48.044	1.00	17.98	C
30	ATOM	3261	N	VAL	B	81	95.838	45.122	43.976	1.00	18.21	N
	ATOM	3262	CA	VAL	B	81	94.534	44.615	43.513	1.00	18.86	C
	ATOM	3263	C	VAL	B	81	93.512	44.736	44.620	1.00	21.20	C
	ATOM	3264	O	VAL	B	81	93.661	44.252	45.748	1.00	18.06	O
	ATOM	3265	CB	VAL	B	81	94.658	43.113	43.125	1.00	23.72	C
35	ATOM	3266	CG1	VAL	B	81	93.311	42.502	42.727	1.00	16.06	C
	ATOM	3267	CG2	VAL	B	81	95.608	42.840	41.968	1.00	23.95	C
	ATOM	3268	N	GLY	B	82	92.378	45.440	44.324	1.00	18.45	N
	ATOM	3269	CA	GLY	B	82	91.308	45.487	45.330	1.00	15.70	C
	ATOM	3270	C	GLY	B	82	90.294	44.370	45.026	1.00	13.73	C
40	ATOM	3271	O	GLY	B	82	89.804	44.235	43.929	1.00	17.77	O
	ATOM	3272	N	LEU	B	83	89.963	43.631	46.085	1.00	14.05	N
	ATOM	3273	CA	LEU	B	83	88.964	42.558	45.968	1.00	17.56	C
	ATOM	3274	C	LEU	B	83	87.924	42.737	47.057	1.00	15.62	C
	ATOM	3275	O	LEU	B	83	88.271	43.147	48.177	1.00	16.11	O
45	ATOM	3276	CB	LEU	B	83	89.571	41.157	46.130	1.00	16.40	C
	ATOM	3277	CG	LEU	B	83	90.630	40.728	45.112	1.00	14.56	C
	ATOM	3278	CD1	LEU	B	83	91.176	39.351	45.502	1.00	18.19	C
	ATOM	3279	CD2	LEU	B	83	90.104	40.735	43.678	1.00	14.73	C
	ATOM	3280	N	VAL	B	84	86.627	42.452	46.736	1.00	12.40	N
50	ATOM	3281	CA	VAL	B	84	85.581	42.466	47.717	1.00	9.97	C
	ATOM	3282	C	VAL	B	84	85.119	41.030	48.067	1.00	12.63	C
	ATOM	3283	O	VAL	B	84	84.737	40.324	47.149	1.00	14.90	O
	ATOM	3284	CB	VAL	B	84	84.314	43.259	47.363	1.00	11.26	C
	ATOM	3285	CG1	VAL	B	84	83.414	43.471	48.557	1.00	15.71	C
55	ATOM	3286	CG2	VAL	B	84	84.746	44.684	46.936	1.00	12.74	C
	ATOM	3287	N	LEU	B	85	85.335	40.635	49.312	1.00	12.20	N
	ATOM	3288	CA	LEU	B	85	84.902	39.271	49.736	1.00	16.61	C
	ATOM	3289	C	LEU	B	85	83.483	39.484	50.236	1.00	16.55	C
	ATOM	3290	O	LEU	B	85	83.281	40.195	51.230	1.00	14.38	O

	ATOM	3291	CB	LEU	B	85	85.889	38.744	50.751	1.00	16.92	C
	ATOM	3292	CG	LEU	B	85	85.764	37.272	51.235	1.00	11.24	C
	ATOM	3293	CD1	LEU	B	85	87.185	36.884	51.677	1.00	15.64	C
	ATOM	3294	CD2	LEU	B	85	84.716	37.100	52.277	1.00	18.62	C
5	ATOM	3295	N	TYR	B	86	82.498	38.954	49.465	1.00	13.72	N
	ATOM	3296	CA	TYR	B	86	81.104	39.294	49.795	1.00	12.98	C
	ATOM	3297	C	TYR	B	86	80.179	38.128	49.427	1.00	12.07	C
	ATOM	3298	O	TYR	B	86	79.588	38.120	48.336	1.00	14.09	O
	ATOM	3299	CB	TYR	B	86	80.739	40.507	48.922	1.00	16.67	C
10	ATOM	3300	CG	TYR	B	86	79.377	41.112	49.048	1.00	12.71	C
	ATOM	3301	CD1	TYR	B	86	78.819	41.467	50.254	1.00	9.83	C
	ATOM	3302	CD2	TYR	B	86	78.617	41.371	47.901	1.00	14.46	C
	ATOM	3303	CE1	TYR	B	86	77.563	42.063	50.364	1.00	11.41	C
	ATOM	3304	CE2	TYR	B	86	77.386	41.979	47.992	1.00	12.89	C
15	ATOM	3305	CZ	TYR	B	86	76.843	42.320	49.195	1.00	15.90	C
	ATOM	3306	OH	TYR	B	86	75.609	42.945	49.266	1.00	15.27	O
	ATOM	3307	N	ASN	B	87	80.096	37.198	50.341	1.00	15.20	N
	ATOM	3308	CA	ASN	B	87	79.150	36.062	50.062	1.00	11.63	C
	ATOM	3309	C	ASN	B	87	78.629	35.510	51.379	1.00	12.79	C
20	ATOM	3310	O	ASN	B	87	78.400	34.272	51.428	1.00	13.83	O
	ATOM	3311	CB	ASN	B	87	79.811	35.016	49.174	1.00	12.57	C
	ATOM	3312	CG	ASN	B	87	78.746	34.160	48.458	1.00	10.94	C
	ATOM	3313	OD1	ASN	B	87	77.582	34.519	48.394	1.00	13.75	O
	ATOM	3314	ND2	ASN	B	87	79.185	33.053	47.881	1.00	16.09	N
25	ATOM	3315	N	LEU	B	88	78.462	36.316	52.424	1.00	14.04	N
	ATOM	3316	CA	LEU	B	88	78.049	35.760	53.714	1.00	15.61	C
	ATOM	3317	C	LEU	B	88	76.730	35.027	53.630	1.00	17.12	C
	ATOM	3318	O	LEU	B	88	75.794	35.390	52.907	1.00	14.00	O
	ATOM	3319	CB	LEU	B	88	77.884	36.944	54.667	1.00	17.52	C
30	ATOM	3320	CG	LEU	B	88	78.240	36.818	56.140	1.00	27.36	C
	ATOM	3321	CD1	LEU	B	88	79.664	36.360	56.359	1.00	18.97	C
	ATOM	3322	CD2	LEU	B	88	77.936	38.171	56.773	1.00	25.99	C
	ATOM	3323	N	PRO	B	89	76.595	33.928	54.345	1.00	14.93	N
	ATOM	3324	CA	PRO	B	89	75.300	33.272	54.481	1.00	15.30	C
35	ATOM	3325	C	PRO	B	89	74.319	34.269	55.084	1.00	18.82	C
	ATOM	3326	O	PRO	B	89	74.671	35.073	55.971	1.00	17.39	O
	ATOM	3327	CB	PRO	B	89	75.454	32.089	55.441	1.00	18.75	C
	ATOM	3328	CG	PRO	B	89	76.911	32.127	55.775	1.00	22.27	C
	ATOM	3329	CD	PRO	B	89	77.598	33.384	55.270	1.00	17.79	C
40	ATOM	3330	N	ASP	B	90	73.075	34.337	54.620	1.00	14.45	N
	ATOM	3331	CA	ASP	B	90	72.078	35.307	55.049	1.00	13.10	C
	ATOM	3332	C	ASP	B	90	72.598	36.756	54.898	1.00	17.12	C
	ATOM	3333	O	ASP	B	90	72.337	37.603	55.727	1.00	14.68	O
	ATOM	3334	CB	ASP	B	90	71.627	35.011	56.490	1.00	15.34	C
45	ATOM	3335	CG	ASP	B	90	70.821	33.718	56.516	1.00	16.30	C
	ATOM	3336	OD1	ASP	B	90	70.637	33.052	55.464	1.00	17.37	O
	ATOM	3337	OD2	ASP	B	90	70.315	33.377	57.608	1.00	16.22	O
	ATOM	3338	N	ARG	B	91	73.262	36.976	53.766	1.00	15.09	N
	ATOM	3339	CA	ARG	B	91	73.846	38.280	53.397	1.00	14.08	C
50	ATOM	3340	C	ARG	B	91	72.850	39.393	53.402	1.00	13.92	C
	ATOM	3341	O	ARG	B	91	71.705	39.187	52.965	1.00	14.74	O
	ATOM	3342	CB	ARG	B	91	74.452	38.102	51.977	1.00	11.17	C
	ATOM	3343	CG	ARG	B	91	75.513	39.121	51.618	1.00	13.54	C
	ATOM	3344	CD	ARG	B	91	76.207	38.741	50.329	1.00	16.43	C
55	ATOM	3345	NE	ARG	B	91	75.305	39.005	49.180	1.00	11.52	N
	ATOM	3346	CZ	ARG	B	91	75.678	38.748	47.931	1.00	12.08	C
	ATOM	3347	NH1	ARG	B	91	76.862	38.249	47.617	1.00	12.65	N
	ATOM	3348	NH2	ARG	B	91	74.802	39.025	46.956	1.00	13.47	N
	ATOM	3349	N	ASP	B	92	73.193	40.557	53.927	1.00	15.59	N

	ATOM	3350	CA	ASP	B	92	72.285	41.720	54.001	1.00	13.61		C
	ATOM	3351	C	ASP	B	92	70.999	41.306	54.686	1.00	17.53		C
	ATOM	3352	O	ASP	B	92	69.886	41.474	54.202	1.00	14.63		O
	ATOM	3353	CB	ASP	B	92	71.990	42.294	52.604	1.00	13.48		C
5	ATOM	3354	CG	ASP	B	92	73.246	42.882	51.985	1.00	16.12		C
	ATOM	3355	OD1	ASP	B	92	73.757	43.901	52.521	1.00	15.18		O
	ATOM	3356	OD2	ASP	B	92	73.727	42.331	50.969	1.00	15.75		O
	ATOM	3357	N	CYS	B	93	71.155	40.868	55.957	1.00	17.61		N
	ATOM	3358	CA	CYS	B	93	70.009	40.272	56.632	1.00	20.60		C
10	ATOM	3359	C	CYS	B	93	68.842	41.222	56.804	1.00	16.80		C
	ATOM	3360	O	CYS	B	93	67.718	40.751	57.022	1.00	20.22		O
	ATOM	3361	CB	CYS	B	93	70.440	39.580	57.940	1.00	15.36		C
	ATOM	3362	SG	CYS	B	93	71.096	40.824	59.138	1.00	15.95		S
	ATOM	3363	N	SER	B	94	69.052	42.527	56.734	1.00	19.34		N
15	ATOM	3364	CA	SER	B	94	68.034	43.538	56.905	1.00	24.34		C
	ATOM	3365	C	SER	B	94	66.845	43.260	55.976	1.00	25.94		C
	ATOM	3366	O	SER	B	94	65.712	43.477	56.391	1.00	31.09		O
	ATOM	3367	CB	SER	B	94	68.601	44.929	56.610	1.00	25.66		C
	ATOM	3368	OG	SER	B	94	69.396	44.897	55.419	1.00	28.46		O
20	ATOM	3369	N	ALA	B	95	67.134	42.748	54.757	1.00	23.27		N
	ATOM	3370	CA	ALA	B	95	66.043	42.455	53.839	1.00	23.45		C
	ATOM	3371	C	ALA	B	95	65.176	41.268	54.217	1.00	25.46		C
	ATOM	3372	O	ALA	B	95	64.118	41.102	53.585	1.00	29.31		O
	ATOM	3373	CB	ALA	B	95	66.601	42.230	52.433	1.00	28.35		C
25	ATOM	3374	N	GLY	B	96	65.558	40.404	55.153	1.00	18.90		N
	ATOM	3375	CA	GLY	B	96	64.738	39.292	55.575	1.00	16.51		C
	ATOM	3376	C	GLY	B	96	65.130	37.951	54.950	1.00	21.15		C
	ATOM	3377	O	GLY	B	96	64.644	36.899	55.360	1.00	20.60		O
	ATOM	3378	N	GLU	B	97	66.086	37.958	54.003	1.00	16.87		N
30	ATOM	3379	CA	GLU	B	97	66.480	36.715	53.347	1.00	16.60		C
	ATOM	3380	C	GLU	B	97	67.843	36.965	52.702	1.00	15.32		C
	ATOM	3381	O	GLU	B	97	68.070	38.157	52.454	1.00	13.74		O
	ATOM	3382	CB	GLU	B	97	65.475	36.336	52.237	1.00	19.41		C
	ATOM	3383	CG	GLU	B	97	65.767	35.072	51.479	1.00	20.53		C
35	ATOM	3384	CD	GLU	B	97	64.839	34.821	50.290	1.00	21.51		C
	ATOM	3385	OE1	GLU	B	97	63.895	35.597	50.119	1.00	20.50		O
	ATOM	3386	OE2	GLU	B	97	65.046	33.804	49.589	1.00	26.57		O
	ATOM	3387	N	SER	B	98	68.710	35.979	52.574	1.00	16.47		N
	ATOM	3388	CA	SER	B	98	70.010	36.336	52.010	1.00	16.57		C
40	ATOM	3389	C	SER	B	98	69.889	37.053	50.670	1.00	15.71		C
	ATOM	3390	O	SER	B	98	69.141	36.612	49.797	1.00	19.00		O
	ATOM	3391	CB	SER	B	98	70.801	35.041	51.768	1.00	14.64		C
	ATOM	3392	OG	SER	B	98	72.123	35.331	51.379	1.00	13.12		O
	ATOM	3393	N	SER	B	99	70.707	38.063	50.493	1.00	16.31		N
45	ATOM	3394	CA	SER	B	99	70.822	38.773	49.214	1.00	15.12		C
	ATOM	3395	C	SER	B	99	71.707	37.998	48.234	1.00	15.31		C
	ATOM	3396	O	SER	B	99	71.769	38.379	47.076	1.00	16.33		O
	ATOM	3397	CB	SER	B	99	71.417	40.163	49.396	1.00	16.49		C
	ATOM	3398	OG	SER	B	99	72.754	40.162	49.876	1.00	15.92		O
50	ATOM	3399	N	GLY	B	100	72.381	36.966	48.679	1.00	15.73		N
	ATOM	3400	CA	GLY	B	100	73.262	36.129	47.906	1.00	13.03		C
	ATOM	3401	C	GLY	B	100	72.799	34.671	47.892	1.00	13.87		C
	ATOM	3402	O	GLY	B	100	71.698	34.327	48.386	1.00	15.71		O
	ATOM	3403	N	GLU	B	101	73.652	33.811	47.359	1.00	11.69		N
55	ATOM	3404	CA	GLU	B	101	73.278	32.415	47.187	1.00	15.02		C
	ATOM	3405	C	GLU	B	101	73.360	31.535	48.421	1.00	18.59		C
	ATOM	3406	O	GLU	B	101	72.787	30.421	48.383	1.00	16.26		O
	ATOM	3407	CB	GLU	B	101	74.214	31.817	46.127	1.00	13.93		C
	ATOM	3408	CG	GLU	B	101	75.670	31.717	46.493	1.00	13.37		C

	ATOM	3409	CD	GLU	B	101	76.649	31.626	45.365	1.00	16.54		C
	ATOM	3410	OE1	GLU	B	101	76.271	31.479	44.184	1.00	17.14		O
	ATOM	3411	OE2	GLU	B	101	77.854	31.744	45.716	1.00	15.54		O
	ATOM	3412	N	LEU	B	102	74.055	31.928	49.470	1.00	16.38		N
5	ATOM	3413	CA	LEU	B	102	74.171	31.114	50.681	1.00	15.29		C
	ATOM	3414	C	LEU	B	102	73.216	31.505	51.785	1.00	14.96		C
	ATOM	3415	O	LEU	B	102	72.915	32.670	52.036	1.00	14.26		O
	ATOM	3416	CB	LEU	B	102	75.611	31.184	51.209	1.00	14.48		C
	ATOM	3417	CG	LEU	B	102	76.703	30.761	50.220	1.00	17.33		C
10	ATOM	3418	CD1	LEU	B	102	78.042	30.799	50.932	1.00	15.63		C .
	ATOM	3419	CD2	LEU	B	102	76.414	29.358	49.699	1.00	16.22		C
	ATOM	3420	N	LYS	B	103	72.627	30.482	52.427	1.00	16.41		N
	ATOM	3421	CA	LYS	B	103	71.656	30.716	53.489	1.00	16.99		C
	ATOM	3422	C	LYS	B	103	72.058	29.882	54.711	1.00	15.52		C
15	ATOM	3423	O	LYS	B	103	72.422	28.704	54.548	1.00	17.11		O
	ATOM	3424	CB	LYS	B	103	70.220	30.301	53.103	1.00	18.12		C
	ATOM	3425	CG	LYS	B	103	69.770	30.941	51.788	1.00	13.55		C
	ATOM	3426	CD	LYS	B	103	68.263	30.726	51.558	1.00	20.50		C
	ATOM	3427	CE	LYS	B	103	67.928	31.352	50.210	1.00	20.50		C
20	ATOM	3428	NZ	LYS	B	103	66.456	31.179	49.879	1.00	20.97		N
	ATOM	3429	N	LEU	B	104	71.895	30.436	55.912	1.00	15.54		N
	ATOM	3430	CA	LEU	B	104	72.323	29.640	57.085	1.00	18.37		C
	ATOM	3431	C	LEU	B	104	71.534	28.333	57.226	1.00	17.70		C
	ATOM	3432	O	LEU	B	104	72.153	27.292	57.539	1.00	21.48		O
25	ATOM	3433	CB	LEU	B	104	72.237	30.470	58.361	1.00	19.22		C
	ATOM	3434	CG	LEU	B	104	73.351	31.511	58.460	1.00	18.43		C
	ATOM	3435	CD1	LEU	B	104	73.039	32.540	59.546	1.00	16.79		C
	ATOM	3436	CD2	LEU	B	104	74.707	30.896	58.759	1.00	20.30		C
	ATOM	3437	N	SER	B	105	70.262	28.420	56.853	1.00	15.63		N
30	ATOM	3438	CA	SER	B	105	69.424	27.197	56.887	1.00	22.72		C
	ATOM	3439	C	SER	B	105	69.716	26.184	55.801	1.00	25.35		C
	ATOM	3440	O	SER	B	105	69.107	25.090	55.816	1.00	25.55		·O
	ATOM	3441	CB	SER	B	105	67.940	27.580	56.798	1.00	25.19		C
	ATOM	3442	OG	SER	B	105	67.655	28.248	55.590	1.00	22.90		O
35	ATOM	3443	N	GLN	B	106	70.579	26.437	54.838	1.00	24.54		N
	ATOM	3444	CA	GLN	B	106	71.020	25.557	53.787	1.00	19.81		C
	ATOM	3445	C	GLN	B	106	72.513	25.283	53.898	1.00	17.26		C
	ATOM	3446	O	GLN	B	106	73.328	25.300	52.971	1.00	19.40		O
	ATOM	3447	CB	GLN	B	106	70.674	26.095	52.384	1.00	24.04		C
40	ATOM	3448	CG	GLN	B	106	69.197	26.406	52.243	1.00	27.32		C
	ATOM	3449	CD	GLN	B	106	68.780	26.862	50.863	1.00	25.24		C
	ATOM	3450	OE1	GLN	B	106	69.575	27.265	50.002	1.00	27.75		O
	ATOM	3451	NE2	GLN	B	106	67.474	26.821	50.626	1.00	32.87		N
	ATOM	3452	N	ASN	B	107	72.935	24.976	55.142	1.00	17.62		N
45	ATOM	3453	CA	ASN	B	107	74.327	24.653	55.431	1.00	16.37		C
	ATOM	3454	C	ASN	B	107	75.287	25.772	54.989	1.00	17.04		C
	ATOM	3455	O	ASN	B	107	76.401	25.529	54.569	1.00	18.76		O
	ATOM	3456	CB	ASN	B	107	74.759	23.358	54.721	1.00	18.52		C
	ATOM	3457	CG	ASN	B	107	76.035	22.716	55.196	1.00	14.62		C
50	ATOM	3458	OD1	ASN	B	107	76.850	22.091	54.472	1.00	23.47		O
	ATOM	3459	ND2	ASN	B	107	76.342	22.805	56.481	1.00	16.64		N
	ATOM	3460	N	GLY	B	108	74.789	27.008	55.135	1.00	20.03		N
	ATOM	3461	CA	GLY	B	108	75.529	28.138	54.573	1.00	15.91		⟨C
	ATOM	3462	C	GLY	B	108	76.853	28.453	55.201	1.00	15.34		C
55	ATOM	3463	O	GLY	B	108	77.800	28.841	54.531	1.00	14.99		O
	ATOM	3464	N	LEU	B	109	76.918	28.350	56.548	1.00	17.11		N
	ATOM	3465	CA	LEU	B	109	78.238	28.582	57.170	1.00	16.63		C
	ATOM	3466	C	LEU	B	109	79.308	27.666	56.601	1.00	16.78		C
	ATOM	3467	O	LEU	B	109	80.394	28.102	56.264	1.00	17.74		O

	ATOM	3468	CB	LEU	B	109	78.045	28.403	58.674	1.00	16.02	C
	ATOM	3469	CG	LEU	B	109	79.285	28.695	59.550	1.00	18.11	C
	ATOM	3470	CD1	LEU	B	109	79.918	30.037	59.214	1.00	21.27	C
	ATOM	3471	CD2	LEU	B	109	78.825	28.695	61.011	1.00	21.87	C
5	ATOM	3472	N	ASN	B	110	79.082	26.340	56.525	1.00	18.97	N
	ATOM	3473	CA	ASN	B	110	80.055	25.430	55.940	1.00	19.83	C
	ATOM	3474	C	ASN	B	110	80.390	25.650	54.475	1.00	13.49	C
	ATOM	3475	O	ASN	B	110	81.532	25.583	54.036	1.00	17.00	O
	ATOM	3476	CB	ASN	B	110	79.560	23.960	56.072	1.00	26.50	C
10	ATOM	3477	CG	ASN	B	110	79.843	23.395	57.451	1.00	25.67	C
	ATOM	3478	OD1	ASN	B	110	79.055	22.559	57.915	1.00	31.15	O
	ATOM	3479	ND2	ASN	B	110	80.911	23.824	58.102	1.00	22.53	N
	ATOM	3480	N	ARG	B	111	79.372	25.929	53.639	1.00	15.53	N
	ATOM	3481	CA	ARG	B	111	79.602	26.241	52.240	1.00	18.42	C
15	ATOM	3482	C	ARG	B	111	80.426	27.536	52.103	1.00	12.97	C
	ATOM	3483	O	ARG	B	111	81.265	27.589	51.220	1.00	16.22	O
	ATOM	3484	CB	ARG	B	111	78.251	26.371	51.550	1.00	19.94	C
	ATOM	3485	CG	ARG	B	111	77.526	25.045	51.335	1.00	23.93	C
	ATOM	3486	CD	ARG	B	111	76.123	25.319	50.813	1.00	27.24	C
20	ATOM	3487	NE	ARG	B	111	75.432	24.095	50.438	1.00	29.18	N
	ATOM	3488	CZ	ARG	B	111	74.175	23.977	50.018	1.00	32.12	C
	ATOM	3489	NH1	ARG	B	111	73.334	24.981	49.893	1.00	27.86	N
	ATOM	3490	NH2	ARG	B	111	73.780	22.735	49.720	1.00	33.98	N
	ATOM	3491	N	TYR	B	112	80.153	28.503	52.975	1.00	15.72	N
25	ATOM	3492	CA	TYR	B	112	80.949	29.738	52.898	1.00	16.36	C
	ATOM	3493	C	TYR	B	112	82.409	29.452	53.196	1.00	16.66	C
	ATOM	3494	O	TYR	B	112	83.279	29.873	52.454	1.00	18.17	O
	ATOM	3495	CB	TYR	B	112	80.415	30.736	53.894	1.00	16.37	C
	ATOM	3496	CG	TYR	B	112	81.101	32.070	54.017	1.00	16.65	C
30	ATOM	3497	CD1	TYR	B	112	80.811	33.066	53.073	1.00	17.33	C
	ATOM	3498	CD2	TYR	B	112	81.969	32.347	55.060	1.00	16.53	C
	ATOM	3499	CE1	TYR	B	112	81.437	34.303	53.196	1.00	16.50	C
	ATOM	3500	CE2	TYR	B	112	82.545	33.611	55.203	1.00	18.00	C
	ATOM	3501	CZ	TYR	B	112	82.271	34.561	54.254	1.00	18.48	C
35	ATOM	3502	OH	TYR	B	112	82.827	35.831	54.359	1.00	13.95	O
	ATOM	3503	N	LYS	B	113	82.660	28.682	54.275	1.00	16.58	N
	ATOM	3504	CA	LYS	B	113	84.061	28.386	54.579	1.00	18.32	C
	ATOM	3505	C	LYS	B	113	84.761	27.596	53.510	1.00	15.29	C
	ATOM	3506	O	LYS	B	113	85.855	27.869	53.070	1.00	18.38	O
40	ATOM	3507	CB	LYS	B	113	84.087	27.503	55.841	1.00	17.98	C
	ATOM	3508	CG	LYS	B	113	83.505	28.228	57.029	1.00	18.74	C
	ATOM	3509	CD	LYS	B	113	84.011	27.468	58.263	1.00	24.57	C
	ATOM	3510	CE	LYS	B	113	83.412	28.071	59.510	1.00	24.59	C
	ATOM	3511	NZ	LYS	B	113	83.538	27.158	60.701	1.00	24.23	N
45	ATOM	3512	N	ASN	B	114	84.093	26.469	53.123	1.00	21.04	N
	ATOM	3513	CA	ASN	B	114	84.713	25.516	52.225	1.00	18.95	C
	ATOM	3514	C	ASN	B	114	84.566	25.712	50.741	1.00	17.06	C
	ATOM	3515	O	ASN	B	114	85.498	25.342	50.030	1.00	21.17	O
	ATOM	3516	CB	ASN	B	114	84.244	24.088	52.611	1.00	21.37	C
50	ATOM	3517	CG	ASN	B	114	84.538	23.806	54.073	1.00	21.77	C
	ATOM	3518	OD1	ASN	B	114	85.591	24.130	54.628	1.00	28.59	O
	ATOM	3519	ND2	ASN	B	114	83.629	23.146	54.778	1.00	22.63	N
	ATOM	3520	N	GLU	B	115	83.477	26.315	50.275	1.00	17.20	N
	ATOM	3521	CA	GLU	B	115	83.314	26.474	48.828	1.00	15.43	C
55	ATOM	3522	C	GLU	B	115	83.543	27.947	48.422	1.00	17.69	C
	ATOM	3523	O	GLU	B	115	83.680	28.188	47.207	1.00	17.94	O
	ATOM	3524	CB	GLU	B	115	81.894	26.107	48.362	1.00	20.26	C
	ATOM	3525	CG	GLU	B	115	81.545	24.640	48.624	1.00	27.90	C
	ATOM	3526	CD	GLU	B	115	80.211	24.311	47.945	1.00	29.81	C

	ATOM	3527	OE1	GLU	B	115	79.997	24.659	46.763	1.00	35.00	O
	ATOM	3528	OE2	GLU	B	115	79.370	23.736	48.635	1.00	29.84	O
	ATOM	3529	N	TYR	B	116	83.681	28.819	49.414	1.00	19.55	N
	ATOM	3530	CA	TYR	B	116	83.927	30.230	49.082	1.00	15.79	C
5	ATOM	3531	C	TYR	B	116	85.250	30.766	49.639	1.00	13.17	C
	ATOM	3532	O	TYR	B	116	86.134	31.063	48.848	1.00	17.40	O
	ATOM	3533	CB	TYR	B	116	82.688	31.068	49.466	1.00	16.80	C
	ATOM	3534	CG	TYR	B	116	82.895	32.545	49.114	1.00	16.19	C
	ATOM	3535	CD1	TYR	B	116	82.924	32.938	47.783	1.00	15.08	C
10	ATOM	3536	CD2	TYR	B	116	83.175	33.478	50.093	1.00	16.80	C
	ATOM	3537	CE1	TYR	B	116	83.132	34.267	47.441	1.00	14.73	C
	ATOM	3538	CE2	TYR	B	116	83.425	34.808	49.764	1.00	18.20	C
	ATOM	3539	CZ	TYR	B	116	83.400	35.174	48.437	1.00	17.15	C
	ATOM	3540	OH	TYR	B	116	83.675	36.484	48.037	1.00	16.59	O
15	ATOM	3541	N	VAL	B	117	85.406	30.857	50.938	1.00	16.29	N
	ATOM	3542	CA	VAL	B	117	86.616	31.394	51.565	1.00	14.14	C
	ATOM	3543	C	VAL	B	117	87.840	30.546	51.232	1.00	15.15	C
	ATOM	3544	O	VAL	B	117	88.869	31.118	50.868	1.00	16.72	O
	ATOM	3545	CB	VAL	B	117	86.448	31.519	53.090	1.00	16.96	C
20	ATOM	3546	CG1	VAL	B	117	87.758	31.948	53.772	1.00	18.85	C
	ATOM	3547	CG2	VAL	B	117	85.366	32.462	53.592	1.00	17.76	C
	ATOM	3548	N	ASN	B	118	87.766	29.212	51.346	1.00	18.58	N
	ATOM	3549	CA	ASN	B	118	88.986	28.435	51.072	1.00	18.85	C
	ATOM	3550	C	ASN	B	118	89.617	28.655	49.741	1.00	18.78	C
25	ATOM	3551	O	ASN	B	118	90.782	28.997	49.557	1.00	20.41	O
	ATOM	3552	CB	ASN	B	118	88.753	26.969	51.441	1.00	19.32	C
	ATOM	3553	CG	ASN	B	118	88.628	26.758	52.933	1.00	24.69	C
	ATOM	3554	OD1	ASN	B	118	88.870	27.594	53.815	1.00	22.08	O
	ATOM	3555	ND2	ASN	B	118	88.207	25.539	53.310	1.00	31.80	N
30	ATOM	3556	N	PRO	B	119	88.865	28.536	48.630	1.00	16.00	N
	ATOM	3557	CA	PRO	B	119	89.376	28.772	47.297	1.00	18.36	C
	ATOM	3558	C	PRO	B	119	89.812	30.217	47.102	1.00	18.46	C
	ATOM	3559	O	PRO	B	119	90.734	30.476	46.322	1.00	18.94	O
	ATOM	3560	CB	PRO	B	119	88.274	28.372	46.302	1.00	23.95	C
35	ATOM	3561	CG	PRO	B	119	87.122	28.036	47.199	1.00	23.80	C
	ATOM	3562	CD	PRO	B	119	87.514	27.982	48.655	1.00	21.92	C
	ATOM	3563	N	PHE	B	120	89.090	31.142	47.763	1.00	17.52	N
	ATOM	3564	CA	PHE	B	120	89.500	32.560	47.596	1.00	19.31	C
	ATOM	3565	C	PHE	B	120	90.922	32.719	48.172	1.00	14.13	C
40	ATOM	3566	O	PHE	B	120	91.774	33.239	47.481	1.00	17.68	O
	ATOM	3567	CB	PHE	B	120	88.489	33.405	48.344	1.00	16.45	C
	ATOM	3568	CG	PHE	B	120	88.475	34.899	48.228	1.00	18.75	C
	ATOM	3569	CD1	PHE	B	120	89.595	35.656	48.551	1.00	18.72	C
	ATOM	3570	CD2	PHE	B	120	87.313	35.550	47.837	1.00	18.58	C
45	ATOM	3571	CE1	PHE	B	120	89.557	37.045	48.449	1.00	16.89	C
	ATOM	3572	CE2	PHE	B	120	87.239	36.921	47.758	1.00	15.08	C
	ATOM	3573	CZ	PHE	B	120	88.373	37.668	48.061	1.00	15.36	C
	ATOM	3574	N	ALA	B	121	91.044	32.220	49.402	1.00	20.28	N
	ATOM	3575	CA	ALA	B	121	92.355	32.303	50.080	1.00	19.92	C
50	ATOM	3576	C	ALA	B	121	93.427	31.557	49.323	1.00	22.39	C
	ATOM	3577	O	ALA	B	121	94.543	32.096	49.181	1.00	26.17	O
	ATOM	3578	CB	ALA	B	121	92.204	31.902	51.546	1.00	22.68	C
	ATOM	3579	N	GLN	B	122	93.173	30.403	48.696	1.00	24.30	N
	ATOM	3580	CA	GLN	B	122	94.147	29.651	47.925	1.00	24.97	C
55	ATOM	3581	C	GLN	B	122	94.710	30.392	46.725	1.00	29.12	C
	ATOM	3582	O	GLN	B	122	95.905	30.396	46.404	1.00	23.53	O
	ATOM	3583	CB	GLN	B	122	93.567	28.295	47.507	1.00	28.16	C
	ATOM	3584	CG	GLN	B	122	93.999	27.719	46.174	1.00	38.86	C
	ATOM	3585	CD	GLN	B	122	93.454	26.315	45.965	1.00	49.47	C

	ATOM	3586	OE1	GLN	B	122	92.636	25.826	46.757	1.00 48.11	O
	ATOM	3587	NE2	GLN	B	122	93.897	25.646	44.905	1.00 54.45	N
	ATOM	3588	N	LYS	B	123	93.835	31.057	45.965	1.00 20.97	N
	ATOM	3589	CA	LYS	B	123	94.256	31.820	44.798	1.00 21.89	C
5	ATOM	3590	C	LYS	B	123	95.123	32.995	45.256	1.00 21.71	C
	ATOM	3591	O	LYS	B	123	96.093	33.238	44.551	1.00 27.66	O
	ATOM	3592	CB	LYS	B	123	92.980	32.282	44.105	1.00 20.46	C
	ATOM	3593	CG	LYS	B	123	92.157	31.220	43.405	1.00 24.83	C
	ATOM	3594	CD	LYS	B	123	90.883	31.875	42.836	1.00 20.09	C
10	ATOM	3595	CE	LYS	B	123	89.917	30.771	42.393	1.00 22.82	C
	ATOM	3596	NZ	LYS	B	123	90.440	30.048	41.189	1.00 24.93	N
	ATOM	3597	N	LEU	B	124	94.801	33.647	46.357	1.00 24.17	N
	ATOM	3598	CA	LEU	B	124	95.595	34.801	46.816	1.00 21.76	C
	ATOM	3599	C	LEU	B	124	96.966	34.322	47.296	1.00 23.77	C
15	ATOM	3600	O	LEU	B	124	97.984	34.931	46.910	1.00 28.41	O
	ATOM	3601	CB	LEU	B	124	94.865	35.593	47.906	1.00 24.20	C
	ATOM	3602	CG	LEU	B	124	94.030	36.776	47.367	1.00 24.16	C
	ATOM	3603	CD1	LEU	B	124	92.891	36.270	46.469	1.00 19.80	C
	ATOM	3604	CD2	LEU	B	124	93.476	37.582	48.531	1.00 23.53	C
20	ATOM	3605	N	LYS	B	125	97.011	33.151	47.910	1.00 25.42	N
	ATOM	3606	CA	LYS	B	125	98.294	32.590	48.376	1.00 26.58	C
	ATOM	3607	C	LYS	B	125	99.199	32.158	47.259	1.00 30.33	C
	ATOM	3608	O	LYS	B	125	100.412	32.491	47.235	1.00 33.95	O
	ATOM	3609	CB	LYS	B	125	97.976	31.495	49.407	1.00 31.01	C
25	ATOM	3610	CG	LYS	B	125	97.495	32.128	50.703	1.00 21.58	C
	ATOM	3611	CD	LYS	B	125	96.749	31.229	51.629	1.00 31.88	C
	ATOM	3612	CE	LYS	B	125	96.490	31.809	53.011	1.00 20.97	C
	ATOM	3613	NZ	LYS	B	125	95.641	30.823	53.749	1.00 29.14	N
	ATOM	3614	N	ALA	B	126	98.709	31.551	46.182	1.00 27.52	N
30	ATOM	3615	CA	ALA	B	126	99.534	31.183	45.026	1.00 23.70	C
	ATOM	3616	C	ALA	B	126	100.120	32.404	44.329	1.00 28.30	C
	ATOM	3617	O	ALA	B	126	101.157	32.390	43.659	1.00 28.11	O
	ATOM	3618	CB	ALA	B	126	98.757	30.328	44.041	1.00 31.19	C
	ATOM	3619	N	ALA	B	127	99.450	33.540	44.486	1.00 29.13	N
35	ATOM	3620	CA	ALA	B	127	99.802	34.835	43.955	1.00 31.16	C
	ATOM	3621	C	ALA	B	127	100.578	35.654	44.977	1.00 34.21	C
	ATOM	3622	O	ALA	B	127	100.174	36.709	45.476	1.00 29.41	O
	ATOM	3623	CB	ALA	B	127	98.495	35.543	43.595	1.00 28.04	C
	ATOM	3624	N	SER	B	128	101.786	35.180	45.298	1.00 32.43	N
40	ATOM	3625	CA	SER	B	128	102.660	35.800	46.271	1.00 32.25	C
	ATOM	3626	C	SER	B	128	103.319	37.073	45.750	1.00 24.54	C
	ATOM	3627	O	SER	B	128	103.683	37.927	46.552	1.00 33.73	O
	ATOM	3628	CB	SER	B	128	103.762	34.818	46.706	1.00 37.87	C
	ATOM	3629	OG	SER	B	128	104.163	33.963	45.661	1.00 39.24	O
45	ATOM	3630	N	ASP	B	129	103.460	37.197	44.455	1.00 31.97	N
	ATOM	3631	CA	ASP	B	129	104.009	38.308	43.721	1.00 29.79	C
	ATOM	3632	C	ASP	B	129	103.026	39.481	43.644	1.00 32.25	C
	ATOM	3633	O	ASP	B	129	103.376	40.560	43.141	1.00 34.17	O
	ATOM	3634	CB	ASP	B	129	104.320	37.840	42.292	1.00 33.19	C
50	ATOM	3635	CG	ASP	B	129	103.185	37.218	41.511	1.00 25.83	C
	ATOM	3636	OD1	ASP	B	129	102.435	36.421	42.110	1.00 36.80	O
	ATOM	3637	OD2	ASP	B	129	103.035	37.497	40.296	1.00 37.23	O
	ATOM	3638	N	VAL	B	130	101.776	39.231	44.051	1.00 29.46	N
	ATOM	3639	CA	VAL	B	130	100.738	40.263	43.980	1.00 27.44	C
55	ATOM	3640	C	VAL	B	130	100.293	40.772	45.328	1.00 24.03	C
	ATOM	3641	O	VAL	B	130	100.064	40.117	46.353	1.00 25.62	O
	ATOM	3642	CB	VAL	B	130	99.506	39.748	43.191	1.00 26.99	C
	ATOM	3643	CG1	VAL	B	130	98.401	40.809	43.180	1.00 26.96	C
	ATOM	3644	CG2	VAL	B	130	99.835	39.387	41.758	1.00 22.05	C

	ATOM	3645	N	GLN B 131	100.121	42.129	45.350	1.00	22.96	N
	ATOM	3646	CA	GLN B 131	99.636	42.783	46.551	1.00	19.81	C
	ATOM	3647	C	GLN B 131	98.094	42.915	46.465	1.00	20.68	C
	ATOM	3648	O	GLN B 131	97.674	43.446	45.445	1.00	21.77	O
5	ATOM	3649	CB	GLN B 131	100.117	44.242	46.677	1.00	22.81	C
	ATOM	3650	CG	GLN B 131	101.640	44.255	46.912	1.00	29.87	C
	ATOM	3651	CD	GLN B 131	102.033	43.500	48.158	1.00	24.86	C
	ATOM	3652	OE1	GLN B 131	101.618	43.807	49.273	1.00	29.69	O
	ATOM	3653	NE2	GLN B 131	102.876	42.482	47.939	1.00	32.63	N
10	ATOM	3654	N	PHE B 132	97.470	42.488	47.537	1.00	22.94	N
	ATOM	3655	CA	PHE B 132	96.000	42.517	47.546	1.00	26.91	C
	ATOM	3656	C	PHE B 132	95.452	43.357	48.671	1.00	21.14	C
	ATOM	3657	O	PHE B 132	95.838	43.264	49.848	1.00	20.79	O
	ATOM	3658	CB	PHE B 132	95.431	41.088	47.798	1.00	20.65	C
15	ATOM	3659	CG	PHE B 132	95.700	40.115	46.695	1.00	22.40	C
	ATOM	3660	CD1	PHE B 132	94.934	40.079	45.556	1.00	19.64	C
	ATOM	3661	CD2	PHE B 132	96.746	39.195	46.807	1.00	17.32	C
	ATOM	3662	CE1	PHE B 132	95.143	39.205	44.510	1.00	24.57	C
	ATOM	3663	CE2	PHE B 132	96.985	38.348	45.750	1.00	20.68	C
20	ATOM	3664	CZ	PHE B 132	96.213	38.312	44.619	1.00	26.31	C
	ATOM	3665	N	ALA B 133	94.401	44.159	48.370	1.00	16.96	N
	ATOM	3666	CA	ALA B 133	93.639	44.809	49.395	1.00	16.49	C
	ATOM	3667	C	ALA B 133	92.235	44.136	49.389	1.00	18.38	C
	ATOM	3668	O	ALA B 133	91.665	44.209	48.323	1.00	17.13	O
25	ATOM	3669	CB	ALA B 133	93.387	46.292	49.193	1.00	14.60	C
	ATOM	3670	N	VAL B 134	91.895	43.491	50.475	1.00	18.42	N
	ATOM	3671	CA	VAL B 134	90.606	42.760	50.517	1.00	15.66	C
	ATOM	3672	C	VAL B 134	89.659	43.423	51.467	1.00	14.54	C
	ATOM	3673	O	VAL B 134	89.874	43.572	52.675	1.00	14.16	O
30	ATOM	3674	CB	VAL B 134	90.900	41.306	50.918	1.00	13.72	C
	ATOM	3675	CG1	VAL B 134	89.589	40.495	50.974	1.00	17.54	C
	ATOM	3676	CG2	VAL B 134	91.842	40.596	49.957	1.00	19.02	C
	ATOM	3677	N	ILE B 135	88.502	43.872	50.951	1.00	13.30	N
	ATOM	3678	CA	ILE B 135	87.422	44.400	51.774	1.00	14.75	C
35	ATOM	3679	C	ILE B 135	86.485	43.235	52.160	1.00	14.96	C
	ATOM	3680	O	ILE B 135	86.101	42.470	51.285	1.00	15.76	O
	ATOM	3681	CB	ILE B 135	86.667	45.528	51.047	1.00	11.61	C
	ATOM	3682	CG1	ILE B 135	87.543	46.792	51.091	1.00	14.70	C
	ATOM	3683	CG2	ILE B 135	85.287	45.746	51.620	1.00	13.63	C
40	ATOM	3684	CD1	ILE B 135	86.940	47.902	50.221	1.00	16.11	C
	ATOM	3685	N	LEU B 136	86.357	43.089	53.449	1.00	13.52	N
	ATOM	3686	CA	LEU B 136	85.589	41.989	54.021	1.00	15.53	C
	ATOM	3687	C	LEU B 136	84.171	42.363	54.349	1.00	13.72	C
	ATOM	3688	O	LEU B 136	83.800	43.154	55.212	1.00	15.39	O
45	ATOM	3689	CB	LEU B 136	86.291	41.489	55.298	1.00	13.79	C
	ATOM	3690	CG	LEU B 136	87.737	41.035	55.172	1.00	18.13	C
	ATOM	3691	CD1	LEU B 136	88.333	40.902	56.570	1.00	23.01	C
	ATOM	3692	CD2	LEU B 136	87.832	39.733	54.380	1.00	19.02	C
	ATOM	3693	N	GLU B 137	83.252	41.681	53.633	1.00	13.75	N
50	ATOM	3694	CA	GLU B 137	81.840	41.685	53.812	1.00	13.00	C
	ATOM	3695	C	GLU B 137	81.161	43.006	54.106	1.00	11.93	C
	ATOM	3696	O	GLU B 137	80.680	43.291	55.204	1.00	13.48	O
	ATOM	3697	CB	GLU B 137	81.481	40.595	54.861	1.00	16.46	C
	ATOM	3698	CG	GLU B 137	81.909	39.210	54.399	1.00	17.10	C
55	ATOM	3699	CD	GLU B 137	81.006	38.627	53.309	1.00	12.29	C
	ATOM	3700	OE1	GLU B 137	79.988	39.251	52.933	1.00	11.47	O
	ATOM	3701	OE2	GLU B 137	81.388	37.542	52.856	1.00	13.64	O
	ATOM	3702	N	PRO B 138	80.949	43.765	53.021	1.00	9.65	N
	ATOM	3703	CA	PRO B 138	80.283	45.064	53.165	1.00	11.66	C

	ATOM	3704	C	PRO	B	138	78.950	44.922	53.848	1.00 16.41	C
	ATOM	3705	O	PRO	B	138	78.139	43.988	53.674	1.00 14.38	O
	ATOM	3706	CB	PRO	B	138	80.041	45.531	51.710	1.00 14.17	C
	ATOM	3707	CG	PRO	B	138	81.226	44.915	51.017	1.00 14.54	C
5	ATOM	3708	CD	PRO	B	138	81.479	43.552	51.696	1.00 15.40	C
	ATOM	3709	N	ASP	B	139	78.715	45.822	54.776	1.00 12.09	N
	ATOM	3710	CA	ASP	B	139	77.649	46.085	55.646	1.00 11.26	C
	ATOM	3711	C	ASP	B	139	77.235	44.998	56.635	1.00 13.19	C
	ATOM	3712	O	ASP	B	139	76.240	45.146	57.330	1.00 13.01	O
10	ATOM	3713	CB	ASP	B	139	76.407	46.427	54.798	1.00 17.62	C
	ATOM	3714	CG	ASP	B	139	76.503	47.802	54.204	1.00 14.56	C
	ATOM	3715	OD1	ASP	B	139	77.318	48.629	54.675	1.00 15.57	O
	ATOM	3716	OD2	ASP	B	139	75.746	48.063	53.230	1.00 15.76	O
	ATOM	3717	N	ALA	B	140	78.031	43.911	56.724	1.00 12.47	N
15	ATOM	3718	CA	ALA	B	140	77.659	42.855	57.667	1.00 10.82	C
	ATOM	3719	C	ALA	B	140	77.712	43.418	59.088	1.00 14.07	C
	ATOM	3720	O	ALA	B	140	76.781	43.169	59.838	1.00 16.04	O
	ATOM	3721	CB	ALA	B	140	78.585	41.661	57.526	1.00 11.51	C
	ATOM	3722	N	ILE	B	141	78.782	44.156	59.401	1.00 14.29	N
20	ATOM	3723	CA	ILE	B	141	78.873	44.726	60.760	1.00 15.41	C
	ATOM	3724	C	ILE	B	141	77.744	45.675	61.073	1.00 17.38	C
	ATOM	3725	O	ILE	B	141	77.192	45.707	62.164	1.00 17.24	O
	ATOM	3726	CB	ILE	B	141	80.265	45.340	61.014	1.00 15.52	C
	ATOM	3727	CG1	ILE	B	141	81.238	44.163	61.224	1.00 16.65	C
25	ATOM	3728	CG2	ILE	B	141	80.260	46.205	62.265	1.00 13.33	C
	ATOM	3729	CD1	ILE	B	141	82.712	44.518	61.367	1.00 17.73	C
	ATOM	3730	N	GLY	B	142	77.318	46.494	60.115	1.00 15.85	N
	ATOM	3731	CA	GLY	B	142	76.202	47.426	60.341	1.00 17.76	C
	ATOM	3732	C	GLY	B	142	74.947	46.627	60.715	1.00 18.26	C
30	ATOM	3733	O	GLY	B	142	74.254	47.011	61.640	1.00 17.59	O
	ATOM	3734	N	ASN	B	143	74.662	45.572	59.958	1.00 15.58	N
	ATOM	3735	CA	ASN	B	143	73.447	44.801	60.289	1.00 18.17	C
	ATOM	3736	C	ASN	B	143	73.555	44.149	61.676	1.00 20.16	C
	ATOM	3737	O	ASN	B	143	72.572	43.925	62.379	1.00 17.81	O
35	ATOM	3738	CB	ASN	B	143	73.251	43.732	59.230	1.00 18.60	C
	ATOM	3739	CG	ASN	B	143	72.637	44.316	57.969	1.00 20.06	C
	ATOM	3740	OD1	ASN	B	143	71.501	44.746	58.042	1.00 21.17	O
	ATOM	3741	ND2	ASN	B	143	73.368	44.350	56.859	1.00 14.95	N
	ATOM	3742	N	MET	B	144	74.774	43.774	62.040	1.00 15.40	N
40	ATOM	3743	CA	MET	B	144	74.950	43.151	63.357	1.00 21.47	C
	ATOM	3744	C	MET	B	144	74.707	44.124	64.496	1.00 27.91	C
	ATOM	3745	O	MET	B	144	74.087	43.756	65.488	1.00 20.91	O
	ATOM	3746	CB	MET	B	144	76.366	42.653	63.517	1.00 19.67	C
	ATOM	3747	CG	MET	B	144	76.579	41.381	62.717	1.00 23.41	C
45	ATOM	3748	SD	MET	B	144	78.362	40.995	62.834	1.00 25.38	S
	ATOM	3749	CE	MET	B	144	78.546	40.493	61.116	1.00 20.83	C
	ATOM	3750	N	VAL	B	145	75.271	45.322	64.360	1.00 25.22	N
	ATOM	3751	CA	VAL	B	145	75.142	46.311	65.417	1.00 25.15	C
	ATOM	3752	C	VAL	B	145	73.738	46.835	65.618	1.00 30.65	C
50	ATOM	3753	O	VAL	B	145	73.289	47.026	66.762	1.00 27.78	O
	ATOM	3754	CB	VAL	B	145	76.128	47.460	65.094	1.00 22.43	C
	ATOM	3755	CG1	VAL	B	145	75.864	48.678	65.958	1.00 22.21	C
	ATOM	3756	CG2	VAL	B	145	77.553	46.962	65.248	1.00 28.65	C
	ATOM	3757	N	THR	B	146	73.028	47.150	64.530	1.00 26.11	N
55	ATOM	3758	CA	THR	B	146	71.720	47.744	64.633	1.00 24.62	C
	ATOM	3759	C	THR	B	146	70.561	46.853	64.238	1.00 21.06	C
	ATOM	3760	O	THR	B	146	69.448	47.260	64.540	1.00 25.27	O
	ATOM	3761	CB	THR	B	146	71.631	49.013	63.729	1.00 31.66	C
	ATOM	3762	OG1	THR	B	146	71.703	48.607	62.352	1.00 23.88	O

	ATOM	3763	CG2	THR	B	146	72.758	49.978	64.049	1.00	28.37	C
	ATOM	3764	N	GLY	B	147	70.768	45.718	63.583	1.00	20.50	N
	ATOM	3765	CA	GLY	B	147	69.651	44.916	63.122	1.00	20.46	C
	ATOM	3766	C	GLY	B	147	68.875	44.278	64.273	1.00	18.32	C
5	ATOM	3767	O	GLY	B	147	69.468	43.540	65.037	1.00	20.95	O
	ATOM	3768	N	THR	B	148	67.568	44.479	64.311	1.00	24.13	N
	ATOM	3769	CA	THR	B	148	66.775	43.925	65.408	1.00	24.05	C
	ATOM	3770	C	THR	B	148	65.763	42.876	64.960	1.00	25.46	C
	ATOM	3771	O	THR	B	148	65.031	42.311	65.767	1.00	25.50	O
10	ATOM	3772	CB	THR	B	148	66.057	45.010	66.231	1.00	25.43	C
	ATOM	3773	OG1	THR	B	148	65.214	45.829	65.414	1.00	27.55	O
	ATOM	3774	CG2	THR	B	148	67.034	45.917	66.974	1.00	28.06	C
	ATOM	3775	N	SER	B	149	65.689	42.559	63.663	1.00	27.18	N
	ATOM	3776	CA	SER	B	149	64.722	41.545	63.240	1.00	24.73	C
15	ATOM	3777	C	SER	B	149	65.216	40.177	63.668	1.00	21.36	C
	ATOM	3778	O	SER	B	149	66.397	39.964	63.907	1.00	22.14	O
	ATOM	3779	CB	SER	B	149	64.514	41.576	61.723	1.00	27.41	C
	ATOM	3780	OG	SER	B	149	65.677	41.056	61.080	1.00	24.60	O
	ATOM	3781	N	ALA	B	150	64.301	39.197	63.771	1.00	24.58	N
20	ATOM	3782	CA	ALA	B	150	64.688	37.849	64.162	1.00	26.91	C
	ATOM	3783	C	ALA	B	150	65.694	37.235	63.203	1.00	22.48	C
	ATOM	3784	O	ALA	B	150	66.622	36.553	63.595	1.00	22.71	O
	ATOM	3785	CB	ALA	B	150	63.428	36.972	64.220	1.00	33.42	C
	ATOM	3786	N	PHE	B	151	65.458	37.491	61.898	1.00	23.13	N
25	ATOM	3787	CA	PHE	B	151	66.368	36.988	60.867	1.00	20.01	C
	ATOM	3788	C	PHE	B	151	67.793	37.464	61.091	1.00	14.60	C
	ATOM	3789	O	PHE	B	151	68.722	36.671	61.044	1.00	16.97	O
	ATOM	3790	CB	PHE	B	151	65.816	37.414	59.493	1.00	19.44	C
	ATOM	3791	CG	PHE	B	151	66.510	36.652	58.401	1.00	20.06	C
30	ATOM	3792	CD1	PHE	B	151	66.301	35.300	58.182	1.00	19.19	C
	ATOM	3793	CD2	PHE	B	151	67.463	37.327	57.641	1.00	16.93	C
	ATOM	3794	CE1	PHE	B	151	67.009	34.647	57.181	1.00	20.25	C
	ATOM	3795	CE2	PHE	B	151	68.138	36.687	56.617	1.00	16.16	C
	ATOM	3796	CZ	PHE	B	151	67.927	35.336	56.396	1.00	20.13	C
35	ATOM	3797	N	CYS	B	152	67.954	38.782	61.329	1.00	16.81	N
	ATOM	3798	CA	CYS	B	152	69.288	39.304	61.614	1.00	15.93	C
	ATOM	3799	C	CYS	B	152	69.806	38.800	62.967	1.00	18.99	C
	ATOM	3800	O	CYS	B	152	71.012	38.520	63.019	1.00	18.93	O
	ATOM	3801	CB	CYS	B	152	69.314	40.852	61.640	1.00	19.71	C
40	ATOM	3802	SG	CYS	B	152	69.415	41.586	59.968	1.00	18.74	S
	ATOM	3803	N	ARG	B	153	68.916	38.725	63.955	1.00	23.55	N
	ATOM	3804	CA	ARG	B	153	69.333	38.282	65.296	1.00	22.77	C
	ATOM	3805	C	ARG	B	153	69.814	36.842	65.255	1.00	23.76	C
	ATOM	3806	O	ARG	B	153	70.875	36.517	65.805	1.00	23.55	O
45	ATOM	3807	CB	ARG	B	153	68.252	38.489	66.361	1.00	20.42	C
	ATOM	3808	CG	ARG	B	153	67.967	39.949	66.637	1.00	23.45	C
	ATOM	3809	CD	ARG	B	153	67.009	40.140	67.796	1.00	27.75	C
	ATOM	3810	NE	ARG	B	153	65.610	40.114	67.348	1.00	24.45	N
	ATOM	3811	CZ	ARG	B	153	64.716	39.303	67.928	1.00	31.22	C
50	ATOM	3812	NH1	ARG	B	153	65.090	38.508	68.917	1.00	26.50	N
	ATOM	3813	NH2	ARG	B	153	63.469	39.317	67.506	1.00	34.12	N
	ATOM	3814	N	ASN	B	154	69.141	35.998	64.466	1.00	23.30	N
	ATOM	3815	CA	ASN	B	154	69.616	34.627	64.260	1.00	23.76	C
	ATOM	3816	C	ASN	B	154	70.882	34.451	63.467	1.00	29.27	C
55	ATOM	3817	O	ASN	B	154	71.704	33.528	63.676	1.00	28.91	O
	ATOM	3818	CB	ASN	B	154	68.417	33.836	63.680	1.00	28.21	C
	ATOM	3819	CG	ASN	B	154	67.595	33.415	64.907	1.00	39.80	C
	ATOM	3820	OD1	ASN	B	154	66.569	33.992	65.266	1.00	42.56	O
	ATOM	3821	ND2	ASN	B	154	68.119	32.409	65.605	1.00	41.92	N

	ATOM	3822	N	ALA B 155	71.229	35.349	62.536	1.00	19.55	N
	ATOM	3823	CA	ALA B 155	72.407	35.276	61.729	1.00	21.10	C
	ATOM	3824	C	ALA B 155	73.666	35.848	62.390	1.00	19.96	C
	ATOM	3825	O	ALA B 155	74.765	35.498	61.967	1.00	19.05	O
5	ATOM	3826	CB	ALA B 155	72.207	36.110	60.446	1.00	24.59	C
	ATOM	3827	N	ARG B 156	73.440	36.658	63.427	1.00	19.26	N
	ATOM	3828	CA	ARG B 156	74.601	37.336	64.006	1.00	26.41	C
	ATOM	3829	C	ARG B 156	75.771	36.457	64.418	1.00	18.67	C
	ATOM	3830	O	ARG B 156	76.914	36.682	64.000	1.00	19.84	O
10	ATOM	3831	CB	ARG B 156	74.141	38.185	65.207	1.00	21.59	C
	ATOM	3832	CG	ARG B 156	75.359	38.989	65.714	1.00	20.92	C
	ATOM	3833	CD	ARG B 156	74.928	40.415	65.920	1.00	23.67	C
	ATOM	3834	NE	ARG B 156	75.912	41.117	66.780	1.00	21.37	N
	ATOM	3835	CZ	ARG B 156	75.490	41.785	67.855	1.00	28.37	C
15	ATOM	3836	NH1	ARG B 156	74.198	41.794	68.117	1.00	28.16	N
	ATOM	3837	NH2	ARG B 156	76.368	42.438	68.609	1.00	34.74	N
	ATOM	3838	N	GLY B 157	75.520	35.424	65.217	1.00	20.28	N
	ATOM	3839	CA	GLY B 157	76.588	34.546	65.705	1.00	24.46	C
	ATOM	3840	C	GLY B 157	77.394	33.874	64.627	1.00	18.18	C
20	ATOM	3841	O	GLY B 157	78.598	33.833	64.470	1.00	17.26	O
	ATOM	3842	N	PRO B 158	76.641	33.170	63.734	1.00	21.55	N
	ATOM	3843	CA	PRO B 158	77.199	32.455	62.603	1.00	18.68	C
	ATOM	3844	C	PRO B 158	77.948	33.430	61.706	1.00	15.85	C
	ATOM	3845	O	PRO B 158	78.981	33.067	61.152	1.00	17.84	O
25	ATOM	3846	CB	PRO B 158	76.024	31.762	61.910	1.00	20.46	C
	ATOM	3847	CG	PRO B 158	75.007	31.699	63.043	1.00	20.08	C
	ATOM	3848	CD	PRO B 158	75.200	32.970	63.847	1.00	21.53	C
	ATOM	3849	N	GLN B 159	77.459	34.652	61.491	1.00	20.97	N
	ATOM	3850	CA	GLN B 159	78.154	35.643	60.669	1.00	24.31	C
30	ATOM	3851	C	GLN B 159	79.452	36.120	61.316	1.00	16.22	C
	ATOM	3852	O	GLN B 159	80.465	36.222	60.622	1.00	17.79	O
	ATOM	3853	CB	GLN B 159	77.224	36.821	60.334	1.00	20.42	C
	ATOM	3854	CG	GLN B 159	76.138	36.406	59.331	1.00	15.14	C
	ATOM	3855	CD	GLN B 159	75.227	37.553	58.938	1.00	22.68	C
35	ATOM	3856	OE1	GLN B 159	75.105	38.528	59.677	1.00	21.04	O
	ATOM	3857	NE2	GLN B 159	74.576	37.389	57.768	1.00	19.53	N
	ATOM	3858	N	GLN B 160	79.471	36.244	62.622	1.00	22.08	N
	ATOM	3859	CA	GLN B 160	80.740	36.575	63.308	1.00	23.01	C
	ATOM	3860	C	GLN B 160	81.735	35.435	63.139	1.00	20.22	C
40	ATOM	3861	O	GLN B 160	82.915	35.648	62.850	1.00	18.55	O
	ATOM	3862	CB	GLN B 160	80.541	36.850	64.779	1.00	21.58	C
	ATOM	3863	CG	GLN B 160	79.630	38.029	65.115	1.00	29.04	C
	ATOM	3864	CD	GLN B 160	79.304	38.031	66.599	1.00	30.14	C
	ATOM	3865	OE1	GLN B 160	79.323	36.968	67.230	1.00	33.19	O
45	ATOM	3866	NE2	GLN B 160	78.976	39.169	67.174	1.00	26.06	N
	ATOM	3867	N	GLU B 161	81.253	34.177	63.293	1.00	20.88	N
	ATOM	3868	CA	GLU B 161	82.152	33.059	63.057	1.00	19.00	C
	ATOM	3869	C	GLU B 161	82.647	33.067	61.610	1.00	15.67	C
	ATOM	3870	O	GLU B 161	83.811	32.804	61.387	1.00	16.94	O
50	ATOM	3871	CB	GLU B 161	81.484	31.713	63.351	1.00	19.88	C
	ATOM	3872	CG	GLU B 161	82.362	30.484	63.169	1.00	26.32	C
	ATOM	3873	CD	GLU B 161	81.686	29.167	63.519	1.00	31.91	C
	ATOM	3874	OE1	GLU B 161	80.710	29.144	64.301	1.00	28.71	O
	ATOM	3875	OE2	GLU B 161	82.134	28.110	63.009	1.00	28.21	O
55	ATOM	3876	N	ALA B 162	81.746	33.316	60.652	1.00	16.26	N
	ATOM	3877	CA	ALA B 162	82.176	33.282	59.262	1.00	16.15	C
	ATOM	3878	C	ALA B 162	83.222	34.367	58.954	1.00	14.47	C
	ATOM	3879	O	ALA B 162	84.159	34.044	58.223	1.00	17.52	O
	ATOM	3880	CB	ALA B 162	80.982	33.487	58.322	1.00	17.33	C

	ATOM	3881	N	ILE	B	163	82.968	35.572	59.486	1.00	15.58	N
	ATOM	3882	CA	ILE	B	163	83.957	36.628	59.133	1.00	14.22	C
	ATOM	3883	C	ILE	B	163	85.293	36.372	59.844	1.00	17.29	O
	ATOM	3884	O	ILE	B	163	86.339	36.439	59.202	1.00	18.10	O
5	ATOM	3885	CB	ILE	B	163	83.382	38.015	59.471	1.00	18.52	C
	ATOM	3886	CG1	ILE	B	163	82.140	38.248	58.603	1.00	18.71	C
	ATOM	3887	CG2	ILE	B	163	84.425	39.094	59.237	1.00	16.28	C
	ATOM	3888	CD1	ILE	B	163	81.358	39.499	58.982	1.00	19.48	C
	ATOM	3889	N	GLY	B	164	85.219	35.958	61.110	1.00	20.76	N
10	ATOM	3890	CA	GLY	B	164	86.449	35.554	61.813	1.00	19.29	C
	ATOM	3891	C	GLY	B	164	87.190	34.462	61.061	1.00	16.00	C
	ATOM	3892	O	GLY	B	164	88.385	34.511	60.721	1.00	21.59	O
	ATOM	3893	N	TYR	B	165	86.441	33.459	60.539	1.00	21.55	N
	ATOM	3894	CA	TYR	B	165	87.076	32.430	59.709	1.00	19.82	C
15	ATOM	3895	C	TYR	B	165	87.811	33.022	58.525	1.00	22.07	C
	ATOM	3896	O	TYR	B	165	88.962	32.742	58.212	1.00	19.77	O
	ATOM	3897	CB	TYR	B	165	86.058	31.346	59.295	1.00	19.85	C
	ATOM	3898	CG	TYR	B	165	86.698	30.256	58.488	1.00	19.36	C
	ATOM	3899	CD1	TYR	B	165	87.436	29.240	59.125	1.00	18.97	C
20	ATOM	3900	CD2	TYR	B	165	86.671	30.208	57.100	1.00	15.34	C
	ATOM	3901	CE1	TYR	B	165	88.053	28.270	58.376	1.00	20.37	C
	ATOM	3902	CE2	TYR	B	165	87.284	29.236	56.350	1.00	20.09	C
	ATOM	3903	CZ	TYR	B	165	87.974	28.229	57.005	1.00	21.43	C
	ATOM	3904	OH	TYR	B	165	88.595	27.252	56.252	1.00	22.80	O
25	ATOM	3905	N	ALA	B	166	87.155	33.915	57.749	1.00	17.04	N
	ATOM	3906	CA	ALA	B	166	87.725	34.565	56.613	1.00	18.38	C
	ATOM	3907	C	ALA	B	166	89.059	35.250	56.956	1.00	14.16	C
	ATOM	3908	O	ALA	B	166	90.040	34.989	56.274	1.00	19.46	O
	ATOM	3909	CB	ALA	B	166	86.662	35.520	56.061	1.00	19.60	C
30	ATOM	3910	N	ILE	B	167	89.027	36.047	58.033	1.00	18.27	N
	ATOM	3911	CA	ILE	B	167	90.266	36.704	58.446	1.00	18.66	C
	ATOM	3912	C	ILE	B	167	91.386	35.684	58.772	1.00	17.26	C
	ATOM	3913	O	ILE	B	167	92.496	35.827	58.326	1.00	18.08	O
	ATOM	3914	CB	ILE	B	167	90.000	37.589	59.654	1.00	14.42	C
35	ATOM	3915	CG1	ILE	B	167	89.059	38.761	59.275	1.00	18.50	C
	ATOM	3916	CG2	ILE	B	167	91.311	38.167	60.174	1.00	16.55	C
	ATOM	3917	CD1	ILE	B	167	88.377	39.388	60.481	1.00	24.38	C
	ATOM	3918	N	SER	B	168	90.966	34.656	59.532	1.00	22.19	N
	ATOM	3919	CA	SER	B	168	91.957	33.617	59.886	1.00	19.64	C
40	ATOM	3920	C	SER	B	168	92.588	32.977	58.677	1.00	21.84	C
	ATOM	3921	O	SER	B	168	93.758	32.547	58.729	1.00	21.47	O
	ATOM	3922	CB	SER	B	168	91.301	32.584	60.815	1.00	19.90	C
	ATOM	3923	OG	SER	B	168	90.604	31.576	60.094	1.00	22.30	O
	ATOM	3924	N	GLN	B	169	91.930	32.830	57.528	1.00	17.10	N
45	ATOM	3925	CA	GLN	B	169	92.461	32.225	56.332	1.00	19.22	C
	ATOM	3926	C	GLN	B	169	93.170	33.155	55.375	1.00	16.88	C
	ATOM	3927	O	GLN	B	169	93.714	32.693	54.354	1.00	17.87	O
	ATOM	3928	CB	GLN	B	169	91.354	31.448	55.573	1.00	20.00	C
	ATOM	3929	CG	GLN	B	169	90.545	30.491	56.437	1.00	19.27	C
50	ATOM	3930	CD	GLN	B	169	91.447	29.334	56.948	1.00	15.65	C
	ATOM	3931	OE1	GLN	B	169	92.035	28.669	56.116	1.00	21.59	O
	ATOM	3932	NE2	GLN	B	169	91.500	29.311	58.271	1.00	20.57	N
	ATOM	3933	N	LEU	B	170	93.261	34.470	55.692	1.00	17.99	N
	ATOM	3934	CA	LEU	B	170	93.877	35.454	54.837	1.00	21.91	C
55	ATOM	3935	C	LEU	B	170	95.005	36.226	55.501	1.00	22.99	C
	ATOM	3936	O	LEU	B	170	95.210	37.430	55.365	1.00	22.45	O
	ATOM	3937	CB	LEU	B	170	92.771	36.441	54.362	1.00	19.03	C
	ATOM	3938	CG	LEU	B	170	91.787	35.709	53.389	1.00	11.90	C
	ATOM	3939	CD1	LEU	B	170	90.504	36.553	53.408	1.00	20.05	C

	ATOM	3940	CD2	LEU	B	170	92.333	35.528	52.010	1.00	16.63	C
	ATOM	3941	N	GLN	B	171	95.834	35.461	56.212	1.00	22.80	N
	ATOM	3942	CA	GLN	B	171	96.962	36.026	56.963	1.00	19.78	C
	ATOM	3943	C	GLN	B	171	98.268	35.782	56.247	1.00	24.71	C
5	ATOM	3944	O	GLN	B	171	98.874	34.698	56.310	1.00	25.88	O
	ATOM	3945	CB	GLN	B	171	96.965	35.418	58.367	1.00	20.61	C
	ATOM	3946	CG	GLN	B	171	95.775	35.673	59.248	1.00	24.02	C
	ATOM	3947	CD	GLN	B	171	95.650	37.161	59.536	1.00	28.19	C
	ATOM	3948	OE1	GLN	B	171	96.632	37.693	60.055	1.00	24.58	O
10	ATOM	3949	NE2	GLN	B	171	94.512	37.768	59.202	1.00	21.14	N
	ATOM	3950	N	ALA	B	172	98.685	36.743	55.428	1.00	21.73	N
	ATOM	3951	CA	ALA	B	172	99.921	36.699	54.683	1.00	18.05	C
	ATOM	3952	C	ALA	B	172	100.420	38.147	54.555	1.00	27.99	C
	ATOM	3953	O	ALA	B	172	99.603	39.072	54.673	1.00	25.60	O
15	ATOM	3954	CB	ALA	B	172	99.768	36.013	53.353	1.00	19.69	C
	ATOM	3955	N	SER	B	173	101.690	38.324	54.224	1.00	30.83	N
	ATOM	3956	CA	SER	B	173	102.318	39.617	54.015	1.00	31.75	C
	ATOM	3957	C	SER	B	173	101.873	40.447	52.825	1.00	30.88	C
	ATOM	3958	O	SER	B	173	102.192	41.639	52.676	1.00	32.10	O
20	ATOM	3959	CB	SER	B	173	103.847	39.346	53.804	1.00	22.83	C
	ATOM	3960	OG	SER	B	173	104.156	39.184	52.435	1.00	45.16	O
	ATOM	3961	N	HIS	B	174	101.240	39.848	51.822	1.00	22.71	N
	ATOM	3962	CA	HIS	B	174	100.821	40.532	50.613	1.00	24.45	C
	ATOM	3963	C	HIS	B	174	99.304	40.744	50.591	1.00	19.78	C
25	ATOM	3964	O	HIS	B	174	98.803	41.254	49.599	1.00	26.27	O
	ATOM	3965	CB	HIS	B	174	101.204	39.783	49.362	1.00	22.82	C
	ATOM	3966	CG	HIS	B	174	100.641	38.397	49.255	1.00	28.16	C
	ATOM	3967	ND1	HIS	B	174	100.753	37.458	50.253	1.00	35.93	N
	ATOM	3968	CD2	HIS	B	174	99.977	37.810	48.229	1.00	27.74	C
30	ATOM	3969	CE1	HIS	B	174	100.171	36.342	49.850	1.00	28.43	C
	ATOM	3970	NE2	HIS	B	174	99.721	36.506	48.620	1.00	25.95	N
	ATOM	3971	N	ILE	B	175	98.683	40.341	51.682	1.00	21.04	N
	ATOM	3972	CA	ILE	B	175	97.208	40.486	51.755	1.00	22.53	C
	ATOM	3973	C	ILE	B	175	96.883	41.436	52.878	1.00	23.42	C
35	ATOM	3974	O	ILE	B	175	97.264	41.229	54.036	1.00	21.16	O
	ATOM	3975	CB	ILE	B	175	96.602	39.086	51.998	1.00	24.23	C
	ATOM	3976	CG1	ILE	B	175	97.093	38.037	51.010	1.00	19.57	C
	ATOM	3977	CG2	ILE	B	175	95.075	39.209	51.938	1.00	23.51	C
	ATOM	3978	CD1	ILE	B	175	96.634	36.620	51.311	1.00	21.61	C
40	ATOM	3979	N	HIS	B	176	96.217	42.567	52.570	1.00	17.50	N
	ATOM	3980	CA	HIS	B	176	95.889	43.636	53.469	1.00	20.14	C
	ATOM	3981	C	HIS	B	176	94.360	43.710	53.601	1.00	21.15	C
	ATOM	3982	O	HIS	B	176	93.697	43.974	52.598	1.00	21.58	O
	ATOM	3983	CB	HIS	B	176	96.463	44.968	52.938	1.00	21.60	C
45	ATOM	3984	CG	HIS	B	176	97.862	44.760	52.425	1.00	26.55	C
	ATOM	3985	ND1	HIS	B	176	98.891	44.778	53.345	1.00	28.92	N
	ATOM	3986	CD2	HIS	B	176	98.398	44.491	51.223	1.00	21.41	C
	ATOM	3987	CE1	HIS	B	176	100.000	44.545	52.699	1.00	16.22	C
	ATOM	3988	NE2	HIS	B	176	99.771	44.351	51.420	1.00	24.82	N
50	ATOM	3989	N	LEU	B	177	93.930	43.374	54.787	1.00	19.28	N
	ATOM	3990	CA	LEU	B	177	92.523	43.207	55.083	1.00	20.75	C
	ATOM	3991	C	LEU	B	177	91.935	44.466	55.688	1.00	21.35	C
	ATOM	3992	O	LEU	B	177	92.383	45.057	56.659	1.00	19.15	O
	ATOM	3993	CB	LEU	B	177	92.288	42.047	56.057	1.00	22.63	C
55	ATOM	3994	CG	LEU	B	177	92.910	40.694	55.691	1.00	19.00	C
	ATOM	3995	CD1	LEU	B	177	92.545	39.675	56.773	1.00	19.67	C
	ATOM	3996	CD2	LEU	B	177	92.457	40.201	54.318	1.00	19.27	C
	ATOM	3997	N	TYR	B	178	90.787	44.840	55.114	1.00	14.82	N
	ATOM	3998	CA	TYR	B	178	89.982	45.956	55.543	1.00	15.89	C

	ATOM	3999	C	TYR	B	178	88.565	45.492	55.865	1.00	14.99		C
	ATOM	4000	O	TYR	B	178	87.795	45.103	54.968	1.00	17.46		O
	ATOM	4001	CB	TYR	B	178	90.003	47.028	54.452	1.00	13.76		C
	ATOM	4002	CG	TYR	B	178	91.363	47.691	54.257	1.00	18.56		C
5	ATOM	4003	CD1	TYR	B	178	92.255	47.228	53.310	1.00	16.23		C
	ATOM	4004	CD2	TYR	B	178	91.664	48.817	55.003	1.00	14.49		C
	ATOM	4005	CE1	TYR	B	178	93.490	47.848	53.135	1.00	19.41		C
	ATOM	4006	CE2	TYR	B	178	92.889	49.453	54.813	1.00	13.99		C
	ATOM	4007	CZ	TYR	B	178	93.779	48.971	53.891	1.00	18.09		C
10	ATOM	4008	OH	TYR	B	178	94.996	49.588	53.671	1.00	19.67		O
	ATOM	4009	N	LEU	B	179	88.252	45.433	57.155	1.00	14.15		N
	ATOM	4010	CA	LEU	B	179	86.945	44.949	57.574	1.00	15.09		C
	ATOM	4011	C	LEU	B	179	85.908	46.031	57.335	1.00	18.64		C
	ATOM	4012	O	LEU	B	179	86.125	47.170	57.773	1.00	15.59		O
15	ATOM	4013	CB	LEU	B	179	87.029	44.576	59.053	1.00	17.68		C
	ATOM	4014	CG	LEU	B	179	85.858	43.984	59.803	1.00	19.25		C
	ATOM	4015	CD1	LEU	B	179	85.208	42.837	59.020	1.00	17.72		C
	ATOM	4016	CD2	LEU	B	179	86.352	43.412	61.146	1.00	19.10		C
	ATOM	4017	N	ASP	B	180	84.827	45.736	56.611	1.00	13.88		N
20	ATOM	4018	CA	ASP	B	180	83.869	46.850	56.364	1.00	11.40		C
	ATOM	4019	C	ASP	B	180	83.148	47.333	57.600	1.00	16.37		C
	ATOM	4020	O	ASP	B	180	82.611	46.570	58.398	1.00	16.08		O
	ATOM	4021	CB	ASP	B	180	82.804	46.411	55.332	1.00	16.37		C
	ATOM	4022	CG	ASP	B	180	81.995	47.642	54.897	1.00	11.61		C
25	ATOM	4023	OD1	ASP	B	180	82.599	48.428	54.135	1.00	16.82		O
	ATOM	4024	OD2	ASP	B	180	80.862	47.773	55.344	1.00	14.55		O
	ATOM	4025	N	VAL	B	181	82.956	48.678	57.708	1.00	12.65		N
	ATOM	4026	CA	VAL	B	181	82.199	49.268	58.767	1.00	14.80		C
	ATOM	4027	C	VAL	B	181	81.137	50.252	58.253	1.00	14.21		C
30	ATOM	4028	O	VAL	B	181	80.827	51.259	58.862	1.00	15.92		O
	ATOM	4029	CB	VAL	B	181	83.023	49.951	59.867	1.00	17.14		C
	ATOM	4030	CG1	VAL	B	181	83.817	48.896	60.638	1.00	16.17		C
	ATOM	4031	CG2	VAL	B	181	84.003	50.983	59.295	1.00	13.24		C
	ATOM	4032	N	ALA	B	182	80.488	49.882	57.152	1.00	14.94		N
35	ATOM	4033	CA	ALA	B	182	79.336	50.623	56.613	1.00	13.26		C
	ATOM	4034	C	ALA	B	182	79.668	52.072	56.259	1.00	15.95		C
	ATOM	4035	O	ALA	B	182	80.574	52.224	55.459	1.00	13.82		O
	ATOM	4036	CB	ALA	B	182	78.077	50.580	57.479	1.00	15.06		C
	ATOM	4037	N	ASN	B	183	78.947	53.053	56.828	1.00	16.04		N
40	ATOM	4038	CA	ASN	B	183	79.265	54.430	56.463	1.00	14.57		C
	ATOM	4039	C	ASN	B	183	78.919	55.295	57.658	1.00	16.62		C
	ATOM	4040	O	ASN	B	183	78.236	54.846	58.588	1.00	15.71		O
	ATOM	4041	CB	ASN	B	183	78.480	54.927	55.237	1.00	14.63		C
	ATOM	4042	CG	ASN	B	183	77.001	55.065	55.438	1.00	14.62		C
45	ATOM	4043	OD1	ASN	B	183	76.475	56.190	55.606	1.00	13.42		O
	ATOM	4044	ND2	ASN	B	183	76.214	53.977	55.388	1.00	16.69		N
	ATOM	4045	N	GLY	B	184	79.367	56.553	57.578	1.00	14.55		N
	ATOM	4046	CA	GLY	B	184	79.138	57.420	58.712	1.00	16.22		C
	ATOM	4047	C	GLY	B	184	77.674	57.597	59.071	1.00	16.07		C
50	ATOM	4048	O	GLY	B	184	77.376	57.813	60.275	1.00	19.13		O
	ATOM	4049	N	GLY	B	185	76.722	57.531	58.158	1.00	15.30		N
	ATOM	4050	CA	GLY	B	185	75.316	57.665	58.412	1.00	18.26		C
	ATOM	4051	C	GLY	B	185	74.647	56.500	59.133	1.00	20.22		C
	ATOM	4052	O	GLY	B	185	73.528	56.625	59.641	1.00	20.18		O
55	ATOM	4053	N	TRP	B	186	75.328	55.354	59.138	1.00	16.86		N
	ATOM	4054	CA	TRP	B	186	74.807	54.152	59.763	1.00	18.31		C
	ATOM	4055	C	TRP	B	186	75.444	53.953	61.148	1.00	19.08		C
	ATOM	4056	O	TRP	B	186	74.728	53.882	62.153	1.00	19.51		O
	ATOM	4057	CB	TRP	B	186	75.154	52.921	58.882	1.00	15.77		C

	ATOM	4058	CG	TRP	B	186	74.468	51.641	59.240	1.00	18.73	C
	ATOM	4059	CD1	TRP	B	186	74.001	51.208	60.459	1.00	22.80	C
	ATOM	4060	CD2	TRP	B	186	74.174	50.566	58.333	1.00	14.01	C
	ATOM	4061	NE1	TRP	B	186	73.426	49.957	60.363	1.00	19.33	N
5	ATOM	4062	CE2	TRP	B	186	73.513	49.549	59.061	1.00	18.76	C
	ATOM	4063	CE3	TRP	B	186	74.372	50.359	56.967	1.00	16.51	C
	ATOM	4064	CZ2	TRP	B	186	73.074	48.368	58.453	1.00	16.28	C
	ATOM	4065	CZ3	TRP	B	186	73.948	49.190	56.367	1.00	17.55	C
	ATOM	4066	CH2	TRP	B	186	73.296	48.210	57.115	1.00	18.14	C
10	ATOM	4067	N	LEU	B	187	76.769	53.926	61.187	1.00	18.02	N
	ATOM	4068	CA	LEU	B	187	77.494	53.658	62.420	1.00	17.51	C
	ATOM	4069	C	LEU	B	187	78.296	54.812	62.993	1.00	22.64	C
	ATOM	4070	O	LEU	B	187	79.034	54.668	63.989	1.00	19.42	O
	ATOM	4071	CB	LEU	B	187	78.456	52.469	62.187	1.00	12.33	C
15	ATOM	4072	CG	LEU	B	187	77.746	51.144	61.813	1.00	13.44	C
	ATOM	4073	CD1	LEU	B	187	78.720	50.036	61.481	1.00	16.68	C
	ATOM	4074	CD2	LEU	B	187	76.737	50.778	62.907	1.00	16.94	C
	ATOM	4075	N	GLY	B	188	78.154	56.008	62.417	1.00	17.49	N
	ATOM	4076	CA	GLY	B	188	79.042	57.102	62.879	1.00	18.99	C
20	ATOM	4077	C	GLY	B	188	78.385	58.011	63.904	1.00	21.19	C
	ATOM	4078	O	GLY	B	188	78.987	59.012	64.334	1.00	22.58	O
	ATOM	4079	N	TRP	B	189	77.171	57.698	64.335	1.00	19.19	N
	ATOM	4080	CA	TRP	B	189	76.481	58.462	65.351	1.00	18.56	C
	ATOM	4081	C	TRP	B	189	77.189	58.251	66.686	1.00	17.15	C
25	ATOM	4082	O	TRP	B	189	77.791	57.202	66.914	1.00	21.16	O
	ATOM	4083	CB	TRP	B	189	75.038	58.019	65.527	1.00	24.63	C
	ATOM	4084	CG	TRP	B	189	74.290	58.220	64.240	1.00	21.45	C
	ATOM	4085	CD1	TRP	B	189	74.115	57.301	63.254	1.00	20.66	C
	ATOM	4086	CD2	TRP	B	189	73.654	59.425	63.814	1.00	20.71	C
30	ATOM	4087	NE1	TRP	B	189	73.387	57.843	62.228	1.00	23.07	N
	ATOM	4088	CE2	TRP	B	189	73.081	59.145	62.543	1.00	20.52	C
	ATOM	4089	CE3	TRP	B	189	73.489	60.689	64.367	1.00	22.01	C
	ATOM	4090	CZ2	TRP	B	189	72.370	60.107	61.830	1.00	30.12	C
	ATOM	4091	CZ3	TRP	B	189	72.785	61.648	63.657	1.00	31.63	C
35	ATOM	4092	CH2	TRP	B	189	72.227	61.336	62.411	1.00	25.50	C
	ATOM	4093	N	ALA	B	190	77.038	59.277	67.527	1.00	22.55	N
	ATOM	4094	CA	ALA	B	190	77.668	59.162	68.838	1.00	20.98	C
	ATOM	4095	C	ALA	B	190	77.286	57.850	69.521	1.00	20.20	C
	ATOM	4096	O	ALA	B	190	78.187	57.320	70.172	1.00	22.91	O
40	ATOM	4097	CB	ALA	B	190	77.260	60.333	69.720	1.00	20.91	C
	ATOM	4098	N	ASP	B	191	76.053	57.388	69.485	1.00	21.69	N
	ATOM	4099	CA	ASP	B	191	75.726	56.149	70.196	1.00	21.21	C
	ATOM	4100	C	ASP	B	191	76.133	54.889	69.452	1.00	25.03	C
	ATOM	4101	O	ASP	B	191	75.835	53.780	69.936	1.00	27.43	O
45	ATOM	4102	CB	ASP	B	191	74.242	56.161	70.528	1.00	23.50	C
	ATOM	4103	CG	ASP	B	191	73.313	56.167	69.337	1.00	34.66	C
	ATOM	4104	OD1	ASP	B	191	73.715	56.403	68.185	1.00	28.87	O
	ATOM	4105	OD2	ASP	B	191	72.102	55.925	69.521	1.00	39.36	O
	ATOM	4106	N	LYS	B	192	76.708	54.961	68.244	1.00	22.39	N
50	ATOM	4107	CA	LYS	B	192	77.035	53.753	67.497	1.00	21.64	C
	ATOM	4108	C	LYS	B	192	78.505	53.458	67.315	1.00	18.45	C
	ATOM	4109	O	LYS	B	192	78.925	52.341	66.985	1.00	19.82	O
	ATOM	4110	CB	LYS	B	192	76.397	53.858	66.095	1.00	18.64	C
	ATOM	4111	CG	LYS	B	192	74.909	54.087	66.080	1.00	27.26	C
55	ATOM	4112	CD	LYS	B	192	74.112	52.803	65.949	1.00	32.40	C
	ATOM	4113	CE	LYS	B	192	73.210	52.595	67.147	1.00	45.02	C
	ATOM	4114	NZ	LYS	B	192	71.956	53.403	67.110	1.00	39.32	N
	ATOM	4115	N	LEU	B	193	79.362	54.470	67.635	1.00	18.85	N
	ATOM	4116	CA	LEU	B	193	80.785	54.260	67.463	1.00	16.44	C

	ATOM	4117	C	LEU	B	193	81.337	53.159	68.374	1.00	17.74		C
	ATOM	4118	O	LEU	B	193	82.117	52.317	67.925	1.00	17.73		O
	ATOM	4119	CB	LEU	B	193	81.543	55.578	67.670	1.00	22.25		C
	ATOM	4120	CG	LEU	B	193	81.264	56.699	66.645	1.00	20.40		C
5	ATOM	4121	CD1	LEU	B	193	81.824	57.997	67.255	1.00	23.94		C
	ATOM	4122	CD2	LEU	B	193	81.909	56.441	65.302	1.00	20.89		C
	ATOM	4123	N	GLU	B	194	80.957	53.189	69.666	1.00	21.89		N
	ATOM	4124	CA	GLU	B	194	81.459	52.212	70.634	1.00	23.64		C
	ATOM	4125	C	GLU	B	194	80.961	50.799	70.321	1.00	16.92		C
10	ATOM	4126	O	GLU	B	194	81.784	49.916	70.239	1.00	20.19		O
	ATOM	4127	CB	GLU	B	194	81.192	52.617	72.090	1.00	22.40		C
	ATOM	4128	CG	GLU	B	194	82.108	53.730	72.607	1.00	21.77		C
	ATOM	4129	CD	GLU	B	194	83.523	53.298	72.932	1.00	22.30		C
	ATOM	4130	OE1	GLU	B	194	83.765	52.158	73.360	1.00	24.06		O
15	ATOM	4131	OE2	GLU	B	194	84.489	54.101	72.809	1.00	21.90		O
	ATOM	4132	N	PRO	B	195	79.693	50.673	70.037	1.00	17.89		N
	ATOM	4133	CA	PRO	B	195	79.115	49.382	69.643	1.00	20.40		C
	ATOM	4134	C	PRO	B	195	79.814	48.784	68.438	1.00	22.63		C
	ATOM	4135	O	PRO	B	195	80.025	47.563	68.298	1.00	22.72		O
20	ATOM	4136	CB	PRO	B	195	77.645	49.719	69.321	1.00	23.25		C
	ATOM	4137	CG	PRO	B	195	77.372	50.862	70.264	1.00	22.51		C
	ATOM	4138	CD	PRO	B	195	78.666	51.682	70.278	1.00	19.04		C
	ATOM	4139	N	THR	B	196	80.172	49.638	67.447	1.00	20.58		N
	ATOM	4140	CA	THR	B	196	80.898	49.206	66.266	1.00	19.89		C
25	ATOM	4141	C	THR	B	196	82.272	48.665	66.635	1.00	24.24		C
	ATOM	4142	O	THR	B	196	82.738	47.623	66.194	1.00	22.29		O
	ATOM	4143	CB	THR	B	196	81.134	50.350	65.244	1.00	17.63		C
	ATOM	4144	OG1	THR	B	196	79.848	50.839	64.879	1.00	19.07		O
	ATOM	4145	CG2	THR	B	196	81.931	49.843	64.041	1.00	17.48		C
30	ATOM	4146	N	ALA	B	197	82.973	49.394	67.506	1.00	20.28		N
	ATOM	4147	CA	ALA	B	197	84.267	48.931	67.971	1.00	17.40		C
	ATOM	4148	C	ALA	B	197	84.169	47.590	68.726	1.00	17.96		C
	ATOM	4149	O	ALA	B	197	85.070	46.783	68.539	1.00	19.17		O
	ATOM	4150	CB	ALA	B	197	84.848	50.007	68.893	1.00	18.28		C
35	ATOM	4151	N	GLN	B	198	83.109	47.400	69.483	1.00	24.07		N
	ATOM	4152	CA	GLN	B	198	82.891	46.175	70.250	1.00	20.46		C
	ATOM	4153	C	GLN	B	198	82.731	44.999	69.282	1.00	24.02		C
	ATOM	4154	O	GLN	B	198	83.379	43.965	69.426	1.00	20.77		O
	ATOM	4155	CB	GLN	B	198	81.635	46.302	71.091	1.00	24.08		C
40	ATOM	4156	CG	GLN	B	198	81.336	45.090	72.005	1.00	24.24		C
	ATOM	4157	CD	GLN	B	198	81.023	45.766	73.348	1.00	46.63		C
	ATOM	4158	OE1	GLN	B	198	81.914	46.254	74.057	1.00	49.94		O
	ATOM	4159	NE2	GLN	B	198	79.738	45.868	73.646	1.00	32.33		N
	ATOM	4160	N	GLU	B	199	81.964	45.263	68.206	1.00	21.26		N
45	ATOM	4161	CA	GLU	B	199	81.710	44.210	67.219	1.00	17.59		C
	ATOM	4162	C	GLU	B	199	82.962	43.750	66.546	1.00	18.76		C
	ATOM	4163	O	GLU	B	199	83.259	42.572	66.319	1.00	20.01		O
	ATOM	4164	CB	GLU	B	199	80.661	44.680	66.175	1.00	14.84		C
	ATOM	4165	CG	GLU	B	199	80.115	43.422	65.480	1.00	21.74		C
50	ATOM	4166	CD	GLU	B	199	79.175	42.675	66.415	1.00	22.93		C
	ATOM	4167	OE1	GLU	B	199	78.933	43.099	67.563	1.00	25.14		O
	ATOM	4168	OE2	GLU	B	199	78.683	41.609	66.000	1.00	25.57		O
	ATOM	4169	N	VAL	B	200	83.858	44.700	66.188	1.00	18.66		N
	ATOM	4170	CA	VAL	B	200	85.154	44.447	65.642	1.00	15.67		C
55	ATOM	4171	C	VAL	B	200	85.989	43.606	66.611	1.00	20.44		C
	ATOM	4172	O	VAL	B	200	86.705	42.706	66.180	1.00	19.49		O
	ATOM	4173	CB	VAL	B	200	85.847	45.774	65.268	1.00	15.78		C
	ATOM	4174	CG1	VAL	B	200	87.303	45.574	64.934	1.00	15.44		C
	ATOM	4175	CG2	VAL	B	200	85.140	46.395	64.055	1.00	20.64		C

	ATOM	4176	N	ALA	B	201	85.954	43.931	67.904	1.00	21.57	N
	ATOM	4177	CA	ALA	B	201	86.771	43.176	68.863	1.00	21.21	C
	ATOM	4178	C	ALA	B	201	86.249	41.746	68.914	1.00	23.43	C
	ATOM	4179	O	ALA	B	201	87.070	40.840	68.864	1.00	23.67	O
5	ATOM	4180	CB	ALA	B	201	86.701	43.889	70.203	1.00	24.56	C
	ATOM	4181	N	THR	B	202	84.935	41.591	69.002	1.00	17.97	N
	ATOM	4182	CA	THR	B	202	84.363	40.229	69.026	1.00	21.03	C
	ATOM	4183	C	THR	B	202	84.776	39.414	67.816	1.00	23.31	C
	ATOM	4184	O	THR	B	202	85.291	38.288	67.880	1.00	22.39	O
10	ATOM	4185	CB	THR	B	202	82.846	40.408	69.146	1.00	21.23	C
	ATOM	4186	OG1	THR	B	202	82.532	40.984	70.419	1.00	26.10	O
	ATOM	4187	CG2	THR	B	202	82.103	39.075	69.021	1.00	19.41	C
	ATOM	4188	N	ILE	B	203	84.649	39.961	66.604	1.00	20.55	N
	ATOM	4189	CA	ILE	B	203	85.060	39.248	65.383	1.00	17.22	C
15	ATOM	4190	C	ILE	B	203	86.537	38.940	65.344	1.00	21.69	C
	ATOM	4191	O	ILE	B	203	86.960	37.849	64.925	1.00	24.70	O
	ATOM	4192	CB	ILE	B	203	84.671	40.097	64.146	1.00	23.56	C
	ATOM	4193	CG1	ILE	B	203	83.156	40.158	64.079	1.00	20.76	C
	ATOM	4194	CG2	ILE	B	203	85.266	39.551	62.854	1.00	22.65	C
20	ATOM	4195	CD1	ILE	B	203	82.542	41.185	63.182	1.00	16.15	C
	ATOM	4196	N	LEU	B	204	87.374	39.870	65.815	1.00	21.97	N
	ATOM	4197	CA	LEU	B	204	88.808	39.629	65.818	1.00	21.00	C
	ATOM	4198	C	LEU	B	204	89.142	38.558	66.871	1.00	19.40	C
	ATOM	4199	O	LEU	B	204	90.024	37.761	66.581	1.00	22.15	O
25	ATOM	4200	CB	LEU	B	204	89.636	40.903	66.041	1.00	22.16	C
	ATOM	4201	CG	LEU	B	204	89.683	41.872	64.860	1.00	26.66	C
	ATOM	4202	CD1	LEU	B	204	90.227	43.248	65.256	1.00	20.14	C
	ATOM	4203	CD2	LEU	B	204	90.510	41.268	63.734	1.00	19.60	C
	ATOM	4204	N	GLN	B	205	88.431	38.536	67.984	1.00	25.29	N
30	ATOM	4205	CA	GLN	B	205	88.689	37.441	68.953	1.00	29.23	C
	ATOM	4206	C	GLN	B	205	88.481	36.104	68.240	1.00	29.46	C
	ATOM	4207	O	GLN	B	205	89.308	35.183	68.275	1.00	31.76	O
	ATOM	4208	CB	GLN	B	205	87.778	37.588	70.156	1.00	31.93	C
	ATOM	4209	CG	GLN	B	205	87.873	38.892	70.913	1.00	36.03	C
35	ATOM	4210	CD	GLN	B	205	86.973	39.045	72.115	1.00	53.54	C
	ATOM	4211	OE1	GLN	B	205	85.754	39.207	72.055	1.00	58.56	O
	ATOM	4212	NE2	GLN	B	205	87.591	39.016	73.298	1.00	59.02	N
	ATOM	4213	N	LYS	B	206	87.366	35.960	67.515	1.00	27.02	N
	ATOM	4214	CA	LYS	B	206	87.055	34.738	66.782	1.00	29.14	C
40	ATOM	4215	C	LYS	B	206	88.019	34.360	65.687	1.00	30.36	C
	ATOM	4216	O	LYS	B	206	88.238	33.180	65.372	1.00	34.85	O
	ATOM	4217	CB	LYS	B	206	85.620	34.848	66.211	1.00	27.96	C
	ATOM	4218	CG	LYS	B	206	84.561	34.708	67.291	1.00	26.91	C
	ATOM	4219	CD	LYS	B	206	83.195	35.168	66.822	1.00	36.28	C
45	ATOM	4220	CE	LYS	B	206	82.131	35.001	67.890	1.00	37.81	C
	ATOM	4221	NZ	LYS	B	206	82.314	33.718	68.638	1.00	46.57	N
	ATOM	4222	N	ALA	B	207	88.716	35.284	65.050	1.00	18.42	N
	ATOM	4223	CA	ALA	B	207	89.696	35.096	64.023	1.00	19.99	C
	ATOM	4224	C	ALA	B	207	90.984	34.424	64.499	1.00	22.55	C
50	ATOM	4225	O	ALA	B	207	91.703	33.827	63.706	1.00	29.59	O
	ATOM	4226	CB	ALA	B	207	90.061	36.463	63.428	1.00	24.95	C
	ATOM	4227	N	GLY	B	208	91.259	34.556	65.796	1.00	24.32	N
	ATOM	4228	CA	GLY	B	208	92.446	33.948	66.388	1.00	29.50	C
	ATOM	4229	C	GLY	B	208	93.367	34.971	67.047	1.00	33.60	C
55	ATOM	4230	O	GLY	B	208	93.393	36.160	66.727	1.00	29.02	O
	ATOM	4231	N	ASN	B	209	94.179	34.483	67.985	1.00	32.42	N
	ATOM	4232	CA	ASN	B	209	95.127	35.288	68.723	1.00	36.56	C
	ATOM	4233	C	ASN	B	209	96.022	36.241	67.969	1.00	35.01	C
	ATOM	4234	O	ASN	B	209	96.286	37.375	68.368	1.00	39.29	O

	ATOM	4235	CB	ASN	B	209	96.102	34.307	69.434	1.00	40.51		C
	ATOM	4236	CG	ASN	B	209	95.501	34.026	70.802	1.00	45.73		C
	ATOM	4237	OD1	ASN	B	209	95.316	34.992	71.541	1.00	45.04		O
	ATOM	4238	ND2	ASN	B	209	95.202	32.771	71.083	1.00	46.97		N
5	ATOM	4239	N	ASN	B	210	96.639	35.699	66.922	1.00	32.93		N
	ATOM	4240	CA	ASN	B	210	97.585	36.441	66.113	1.00	32.79		C
	ATOM	4241	C	ASN	B	210	96.962	36.953	64.824	1.00	31.82		C
	ATOM	4242	O	ASN	B	210	97.687	37.414	63.951	1.00	34.76		O
	ATOM	4243	CB	ASN	B	210	98.782	35.527	65.819	1.00	26.91		C
10	ATOM	4244	CG	ASN	B	210	99.657	35.408	67.060	1.00	41.97		C
	ATOM	4245	OD1	ASN	B	210	99.999	36.425	67.659	1.00	41.64		O
	ATOM	4246	ND2	ASN	B	210	99.982	34.182	67.442	1.00	31.49		N
	ATOM	4247	N	ALA	B	211	95.653	36.837	64.699	1.00	29.07		N
	ATOM	4248	CA	ALA	B	211	94.971	37.289	63.492	1.00	29.41		C
15	ATOM	4249	C	ALA	B	211	94.990	38.820	63.433	1.00	32.04		C
	ATOM	4250	O	ALA	B	211	94.552	39.426	64.425	1.00	32.62		O
	ATOM	4251	CB	ALA	B	211	93.495	36.901	63.543	1.00	23.68		C
	ATOM	4252	N	LYS	B	212	95.416	39.361	62.302	1.00	24.74		N
	ATOM	4253	CA	LYS	B	212	95.385	40.829	62.245	1.00	27.27		C
20	ATOM	4254	C	LYS	B	212	94.603	41.298	61.021	1.00	28.66		C
	ATOM	4255	O	LYS	B	212	94.354	40.534	60.092	1.00	22.48		O
	ATOM	4256	CB	LYS	B	212	96.786	41.411	62.167	1.00	35.37		C
	ATOM	4257	CG	LYS	B	212	97.730	40.830	61.148	1.00	46.38		C
	ATOM	4258	CD	LYS	B	212	98.806	39.954	61.744	1.00	53.65		C
25	ATOM	4259	CE	LYS	B	212	99.834	40.670	62.600	1.00	58.55		C
	ATOM	4260	NZ	LYS	B	212	100.782	39.680	63.206	1.00	62.28		N
	ATOM	4261	N	ILE	B	213	94.250	42.574	61.052	1.00	22.99		N
	ATOM	4262	CA	ILE	B	213	93.661	43.263	59.894	1.00	21.04		C
	ATOM	4263	C	ILE	B	213	94.415	44.604	59.825	1.00	21.00		C
30	ATOM	4264	O	ILE	B	213	94.865	45.032	60.893	1.00	21.34		O
	ATOM	4265	CB	ILE	B	213	92.158	43.552	59.955	1.00	18.61		C
	ATOM	4266	CG1	ILE	B	213	91.757	44.315	61.205	1.00	19.97		C
	ATOM	4267	CG2	ILE	B	213	91.387	42.210	59.857	1.00	20.94		C
	ATOM	4268	CD1	ILE	B	213	90.298	44.682	61.343	1.00	17.36		C
35	ATOM	4269	N	ARG	B	214	94.462	45.214	58.666	1.00	24.30		N
	ATOM	4270	CA	ARG	B	214	95.078	46.533	58.504	1.00	21.11		C
	ATOM	4271	C	ARG	B	214	94.124	47.591	59.043	1.00	24.53		C
	ATOM	4272	O	ARG	B	214	94.507	48.605	59.661	1.00	20.28		O
	ATOM	4273	CB	ARG	B	214	95.425	46.813	57.035	1.00	19.86		C
40	ATOM	4274	CG	ARG	B	214	95.725	48.301	56.765	1.00	19.19		C
	ATOM	4275	CD	ARG	B	214	97.012	48.673	57.511	1.00	22.59		C
	ATOM	4276	NE	ARG	B	214	97.350	50.091	57.324	1.00	20.91		N
	ATOM	4277	CZ	ARG	B	214	98.432	50.691	57.812	1.00	24.12		C
	ATOM	4278	NH1	ARG	B	214	99.297	50.011	58.549	1.00	24.52		N
45	ATOM	4279	NH2	ARG	B	214	98.666	51.992	57.600	1.00	21.57		N
	ATOM	4280	N	GLY	B	215	92.820	47.388	58.826	1.00	18.54		N
	ATOM	4281	CA	GLY	B	215	91.857	48.396	59.259	1.00	19.25		C
	ATOM	4282	C	GLY	B	215	90.498	48.108	58.625	1.00	19.04		C
	ATOM	4283	O	GLY	B	215	89.978	47.011	58.746	1.00	19.44		O
50	ATOM	4284	N	PHE	B	216	89.815	49.203	58.277	1.00	19.68		N
	ATOM	4285	CA	PHE	B	216	88.409	49.183	57.895	1.00	14.50		C
	ATOM	4286	C	PHE	B	216	88.107	49.853	56.552	1.00	19.42		C
	ATOM	4287	O	PHE	B	216	88.901	50.617	56.024	1.00	15.19		O
	ATOM	4288	CB	PHE	B	216	87.642	49.917	59.012	1.00	17.06		C
55	ATOM	4289	CG	PHE	B	216	88.044	49.412	60.390	1.00	17.34		C
	ATOM	4290	CD1	PHE	B	216	87.646	48.179	60.831	1.00	19.49		C
	ATOM	4291	CD2	PHE	B	216	88.926	50.166	61.174	1.00	21.89		C
	ATOM	4292	CE1	PHE	B	216	88.037	47.706	62.075	1.00	23.76		C
	ATOM	4293	CE2	PHE	B	216	89.334	49.684	62.406	1.00	19.58		C

	ATOM	4294	CZ	PHE	B	216	88.890	48.452	62.870	1.00 21.70	C
	ATOM	4295	N	SER	B	217	86.922	49.497	56.006	1.00 16.32	N
	ATOM	4296	CA	SER	B	217	86.474	50.183	54.788	1.00 16.98	C
	ATOM	4297	C	SER	B	217	85.180	50.925	55.147	1.00 15.15	C
5	ATOM	4298	O	SER	B	217	84.440	50.462	56.015	1.00 14.34	O
	ATOM	4299	CB	SER	B	217	86.227	49.279	53.606	1.00 13.74	C
	ATOM	4300	OG	SER	B	217	85.326	48.193	53.828	1.00 12.93	O
	ATOM	4301	N	SER	B	218	84.951	52.061	54.487	1.00 12.49	N
	ATOM	4302	CA	SER	B	218	83.675	52.747	54.704	1.00 12.51	C
10	ATOM	4303	C	SER	B	218	83.210	53.404	53.398	1.00 12.40	C
	ATOM	4304	O	SER	B	218	83.985	53.623	52.462	1.00 13.94	O
	ATOM	4305	CB	SER	B	218	83.751	53.770	55.827	1.00 17.22	C
	ATOM	4306	OG	ASER	B	218	84.532	54.868	55.397	0.50 14.96	O
	ATOM	4307	OG	BSER	B	218	82.502	54.368	56.122	0.50 16.14	O
15	ATOM	4308	N	ASN	B	219	81.929	53.702	53.337	1.00 14.12	N
	ATOM	4309	CA	ASN	B	219	81.208	54.299	52.231	1.00 12.90	C
	ATOM	4310	C	ASN	B	219	81.113	53.462	50.987	1.00 16.12	C
	ATOM	4311	O	ASN	B	219	80.782	53.927	49.875	1.00 12.91	O
	ATOM	4312	CB	ASN	B	219	81.867	55.662	51.876	1.00 10.77	C
20	ATOM	4313	CG	ASN	B	219	80.897	56.685	51.330	1.00 16.28	C
	ATOM	4314	OD1	ASN	B	219	79.799	56.902	51.815	1.00 17.19	O
	ATOM	4315	ND2	ASN	B	219	81.306	57.374	50.250	1.00 13.28	N
	ATOM	4316	N	VAL	B	220	81.400	52.147	51.127	1.00 13.21	N
	ATOM	4317	CA	VAL	B	220	81.315	51.260	49.996	1.00 13.06	C
25	ATOM	4318	C	VAL	B	220	79.860	51.199	49.547	1.00 13.26	C
	ATOM	4319	O	VAL	B	220	78.910	50.985	50.281	1.00 13.48	O
	ATOM	4320	CB	VAL	B	220	81.753	49.830	50.385	1.00 13.78	C
	ATOM	4321	CG1	VAL	B	220	81.547	48.868	49.222	1.00 13.64	C
	ATOM	4322	CG2	VAL	B	220	83.199	49.850	50.862	1.00 14.47	C
30	ATOM	4323	N	SER	B	221	79.680	51.466	48.244	1.00 9.67	N
	ATOM	4324	CA	SER	B	221	78.378	51.572	47.610	1.00 11.45	C
	ATOM	4325	C	SER	B	221	77.516	52.699	48.132	1.00 13.47	C
	ATOM	4326	O	SER	B	221	76.336	52.762	47.785	1.00 14.77	O
	ATOM	4327	CB	SER	B	221	77.505	50.294	47.594	1.00 12.65	C
35	ATOM	4328	OG	ASER	B	221	76.769	50.171	48.791	0.30 18.63	O
	ATOM	4329	OG	BSER	B	221	78.324	49.126	47.513	0.70 9.29	O
	ATOM	4330	N	ASN	B	222	78.085	53.611	48.902	1.00 12.82	N
	ATOM	4331	CA	ASN	B	222	77.345	54.753	49.412	1.00 11.81	C
	ATOM	4332	C	ASN	B	222	77.835	56.003	48.709	1.00 13.32	C
40	ATOM	4333	O	ASN	B	222	78.395	55.957	47.618	1.00 14.21	O
	ATOM	4334	CB	ASN	B	222	77.416	54.905	50.931	1.00 10.47	C
	ATOM	4335	CG	ASN	B	222	76.177	55.500	51.553	1.00 21.50	C
	ATOM	4336	OD1	ASN	B	222	75.953	56.728	51.558	1.00 18.33	O
	ATOM	4337	ND2	ASN	B	222	75.378	54.578	52.121	1.00 21.35	N
45	ATOM	4338	N	TYR	B	223	77.387	57.152	49.273	1.00 12.91	N
	ATOM	4339	CA	TYR	B	223	77.534	58.381	48.477	1.00 14.69	C
	ATOM	4340	C	TYR	B	223	78.008	59.592	49.271	1.00 15.82	C
	ATOM	4341	O	TYR	B	223	77.906	60.753	48.824	1.00 13.70	O
	ATOM	4342	CB	TYR	B	223	76.133	58.730	47.923	1.00 14.43	C
50	ATOM	4343	CG	TYR	B	223	75.378	57.629	47.190	1.00 12.12	C
	ATOM	4344	CD1	TYR	B	223	74.615	56.724	47.912	1.00 17.11	C
	ATOM	4345	CD2	TYR	B	223	75.462	57.507	45.796	1.00 15.17	C
	ATOM	4346	CE1	TYR	B	223	73.946	55.694	47.297	1.00 13.38	C
	ATOM	4347	CE2	TYR	B	223	74.769	56.495	45.184	1.00 14.55	C
55	ATOM	4348	CZ	TYR	B	223	74.022	55.597	45.921	1.00 12.53	C
	ATOM	4349	OH	TYR	B	223	73.321	54.625	45.270	1.00 14.37	O
	ATOM	4350	N	ASN	B	224	78.454	59.323	50.508	1.00 13.79	N
	ATOM	4351	CA	ASN	B	224	78.842	60.453	51.363	1.00 12.59	C
	ATOM	4352	C	ASN	B	224	80.120	61.070	50.847	1.00 14.44	C

	ATOM	4353	O	ASN	B	224	80.968	60.387	50.275	1.00 12.99	O
	ATOM	4354	CB	ASN	B	224	79.167	59.917	52.781	1.00 16.69	C
	ATOM	4355	CG	ASN	B	224	77.938	59.330	53.427	1.00 14.29	C
	ATOM	4356	OD1	ASN	B	224	76.808	59.567	53.104	1.00 16.54	O
5	ATOM	4357	ND2	ASN	B	224	78.142	58.414	54.402	1.00 14.31	N
	ATOM	4358	N	PRO	B	225	80.259	62.388	51.020	1.00 16.23	N
	ATOM	4359	CA	PRO	B	225	81.490	63.065	50.712	1.00 17.76	C
	ATOM	4360	C	PRO	B	225	82.639	62.611	51.615	1.00 16.04	C
	ATOM	4361	O	PRO	B	225	82.396	62.280	52.786	1.00 17.79	O
10	ATOM	4362	CB	PRO	B	225	81.199	64.571	50.986	1.00 17.09	C
	ATOM	4363	CG	PRO	B	225	80.087	64.480	51.991	1.00 16.17	C
	ATOM	4364	CD	PRO	B	225	79.300	63.187	51.788	1.00 16.78	C
	ATOM	4365	N	TYR	B	226	83.849	62.647	51.095	1.00 18.45	N
	ATOM	4366	CA	TYR	B	226	85.011	62.365	51.936	1.00 14.80	C
15	ATOM	4367	C	TYR	B	226	85.263	63.539	52.885	1.00 20.68	C
	ATOM	4368	O	TYR	B	226	85.364	63.344	54.097	1.00 20.55	O
	ATOM	4369	CB	TYR	B	226	86.262	62.121	51.102	1.00 15.96	C
	ATOM	4370	CG	TYR	B	226	87.496	62.006	51.962	1.00 18.14	C
	ATOM	4371	CD1	TYR	B	226	87.686	60.837	52.703	1.00 19.66	C
20	ATOM	4372	CD2	TYR	B	226	88.486	62.969	52.041	1.00 19.41	C
	ATOM	4373	CE1	TYR	B	226	88.794	60.644	53.497	1.00 19.27	C
	ATOM	4374	CE2	TYR	B	226	89.600	62.778	52.823	1.00 20.75	C
	ATOM	4375	CZ	TYR	B	226	89.754	61.611	53.557	1.00 20.23	C
	ATOM	4376	OH	TYR	B	226	90.889	61.455	54.340	1.00 24.36	O
25	ATOM	4377	N	SER	B	227	85.340	64.760	52.342	1.00 21.66	N
	ATOM	4378	CA	SER	B	227	85.624	65.894	53.235	1.00 21.29	C
	ATOM	4379	C	SER	B	227	84.835	67.105	52.729	1.00 23.86	C
	ATOM	4380	O	SER	B	227	85.046	67.459	51.573	1.00 24.44	O
	ATOM	4381	CB	SER	B	227	87.109	66.229	53.249	1.00 24.88	C
30	ATOM	4382	OG	SER	B	227	87.427	67.292	54.137	1.00 28.51	O
	ATOM	4383	N	THR	B	228	84.001	67.611	53.596	1.00 19.81	N
	ATOM	4384	CA	THR	B	228	83.268	68.825	53.158	1.00 21.93	C
	ATOM	4385	C	THR	B	228	83.020	69.704	54.372	1.00 19.87	C
	ATOM	4386	O	THR	B	228	82.687	69.251	55.472	1.00 23.64	O
35	ATOM	4387	CB	THR	B	228	81.950	68.501	52.450	1.00 22.85	C
	ATOM	4388	OG1	THR	B	228	81.263	69.728	52.152	1.00 25.99	O
	ATOM	4389	CG2	THR	B	228	81.049	67.657	53.327	1.00 25.62	C
	ATOM	4390	N	SER	B	229	83.016	71.024	54.068	1.00 26.47	N
	ATOM	4391	CA	SER	B	229	82.660	72.003	55.078	1.00 23.55	C
40	ATOM	4392	C	SER	B	229	81.166	72.317	54.991	1.00 27.25	C
	ATOM	4393	O	SER	B	229	80.593	73.105	55.752	1.00 27.41	O
	ATOM	4394	CB	SER	B	229	83.451	73.328	54.991	1.00 19.89	C
	ATOM	4395	OG	SER	B	229	83.457	73.796	53.656	1.00 30.00	O
	ATOM	4396	N	ASN	B	230	80.424	71.620	54.124	1.00 21.18	N
45	ATOM	4397	CA	ASN	B	230	78.979	71.814	54.004	1.00 24.17	C
	ATOM	4398	C	ASN	B	230	78.234	70.508	53.842	1.00 22.40	C
	ATOM	4399	O	ASN	B	230	77.512	70.266	52.879	1.00 24.08	O
	ATOM	4400	CB	ASN	B	230	78.682	72.769	52.838	1.00 32.64	C
	ATOM	4401	CG	ASN	B	230	77.230	73.165	52.652	1.00 38.99	C
50	ATOM	4402	OD1	ASN	B	230	76.521	73.432	53.622	1.00 36.44	O
	ATOM	4403	ND2	ASN	B	230	76.748	73.186	51.407	1.00 38.74	N
	ATOM	4404	N	PRO	B	231	78.252	69.665	54.873	1.00 20.53	N
	ATOM	4405	CA	PRO	B	231	77.533	68.396	54.895	1.00 22.58	C
	ATOM	4406	C	PRO	B	231	76.045	68.653	54.907	1.00 24.40	C
55	ATOM	4407	O	PRO	B	231	75.617	69.735	55.320	1.00 24.70	O
	ATOM	4408	CB	PRO	B	231	77.988	67.687	56.190	1.00 25.34	C
	ATOM	4409	CG	PRO	B	231	78.412	68.850	57.050	1.00 26.80	C
	ATOM	4410	CD	PRO	B	231	78.998	69.904	56.124	1.00 25.68	C
	ATOM	4411	N	PRO	B	232	75.205	67.751	54.415	1.00 23.71	N

ATOM	4412	CA	PRO	B	232	73.774	67.879	54.388	1.00	23.71	C
ATOM	4413	C	PRO	B	232	73.179	68.075	55.765	1.00	24.02	C
ATOM	4414	O	PRO	B	232	73.680	67.567	56.765	1.00	23.48	O
ATOM	4415	CB	PRO	B	232	73.219	66.522	53.894	1.00	23.88	C
5 ATOM	4416	CG	PRO	B	232	74.408	65.936	53.217	1.00	23.07	C
ATOM	4417	CD	PRO	B	232	75.674	66.457	53.871	1.00	30.70	C
ATOM	4418	N	PRO	B	233	72.056	68.760	55.886	1.00	24.16	N
ATOM	4419	CA	PRO	B	233	71.321	68.972	57.108	1.00	24.88	C
ATOM	4420	C	PRO	B	233	70.961	67.707	57.878	1.00	27.28	C
10 ATOM	4421	O	PRO	B	233	70.979	67.711	59.117	1.00	28.43	O
ATOM	4422	CB	PRO	B	233	69.984	69.661	56.725	1.00	30.23	C
ATOM	4423	CG	PRO	B	233	70.404	70.326	55.438	1.00	32.57	C
ATOM	4424	CD	PRO	B	233	71.387	69.395	54.737	1.00	30.54	C
ATOM	4425	N	TYR	B	234	70.697	66.594	57.179	1.00	23.72	N
15 ATOM	4426	CA	TYR	B	234	70.395	65.334	57.851	1.00	27.99	C
ATOM	4427	C	TYR	B	234	71.568	64.812	58.678	1.00	25.78	C
ATOM	4428	O	TYR	B	234	71.374	63.870	59.463	1.00	27.46	O
ATOM	4429	CB	TYR	B	234	69.874	64.270	56.897	1.00	25.83	C
ATOM	4430	CG	TYR	B	234	70.776	63.812	55.785	1.00	25.15	C
20 ATOM	4431	CD1	TYR	B	234	72.057	63.297	56.036	1.00	22.25	C
ATOM	4432	CD2	TYR	B	234	70.371	63.873	54.468	1.00	23.87	C
ATOM	4433	CE1	TYR	B	234	72.889	62.901	55.007	1.00	20.62	C
ATOM	4434	CE2	TYR	B	234	71.199	63.467	53.433	1.00	21.14	C
ATOM	4435	CZ	TYR	B	234	72.452	62.975	53.711	1.00	20.43	C
25 ATOM	4436	OH	TYR	B	234	73.262	62.582	52.670	1.00	23.64	O
ATOM	4437	N	THR	B	235	72.775	65.352	58.557	1.00	21.65	N
ATOM	4438	CA	THR	B	235	73.920	64.952	59.351	1.00	21.99	C
ATOM	4439	C	THR	B	235	74.004	65.716	60.676	1.00	22.96	C
ATOM	4440	O	THR	B	235	74.986	65.634	61.416	1.00	22.87	O
30 ATOM	4441	CB	THR	B	235	75.263	65.175	58.626	1.00	21.87	C
ATOM	4442	OG1	THR	B	235	75.544	66.580	58.504	1.00	20.86	O
ATOM	4443	CG2	THR	B	235	75.228	64.555	57.228	1.00	19.21	C
ATOM	4444	N	SER	B	236	73.049	66.606	60.865	1.00	27.15	N
ATOM	4445	CA	SER	B	236	72.966	67.439	62.047	1.00	31.54	C
35 ATOM	4446	C	SER	B	236	72.893	66.519	63.264	1.00	29.28	C
ATOM	4447	O	SER	B	236	72.138	65.550	63.292	1.00	33.89	O
ATOM	4448	CB	SER	B	236	71.772	68.383	61.977	1.00	38.83	C
ATOM	4449	OG	SER	B	236	71.692	69.151	63.159	1.00	38.58	O
ATOM	4450	N	GLY	B	237	73.763	66.820	64.220	1.00	30.14	N
40 ATOM	4451	CA	GLY	B	237	73.809	66.005	65.433	1.00	32.92	C
ATOM	4452	C	GLY	B	237	74.818	64.872	65.317	1.00	34.16	C
ATOM	4453	O	GLY	B	237	75.027	64.190	66.327	1.00	34.16	O
ATOM	4454	N	SER	B	238	75.426	64.651	64.143	1.00	24.81	N
ATOM	4455	CA	SER	B	238	76.369	63.523	64.099	1.00	20.48	C
45 ATOM	4456	C	SER	B	238	77.777	64.047	64.173	1.00	20.06	C
ATOM	4457	O	SER	B	238	78.173	64.990	63.476	1.00	24.23	O
ATOM	4458	CB	SER	B	238	76.187	62.748	62.775	1.00	28.36	C
ATOM	4459	OG	SER	B	238	77.364	61.974	62.545	1.00	24.23	O
ATOM	4460	N	PRO	B	239	78.666	63.363	64.886	1.00	20.04	N
50 ATOM	4461	CA	PRO	B	239	80.078	63.684	64.921	1.00	23.84	C
ATOM	4462	C	PRO	B	239	80.830	63.214	63.691	1.00	23.75	C
ATOM	4463	O	PRO	B	239	81.982	63.560	63.409	1.00	23.78	O
ATOM	4464	CB	PRO	B	239	80.626	62.959	66.178	1.00	24.80	C
ATOM	4465	CG	PRO	B	239	79.732	61.744	66.157	1.00	17.59	C
55 ATOM	4466	CD	PRO	B	239	78.345	62.201	65.711	1.00	24.29	C
ATOM	4467	N	SER	B	240	80.168	62.455	62.816	1.00	20.96	N
ATOM	4468	CA	SER	B	240	80.710	61.906	61.586	1.00	23.28	C
ATOM	4469	C	SER	B	240	79.992	62.332	60.325	1.00	22.01	C
ATOM	4470	O	SER	B	240	79.560	61.499	59.498	1.00	17.70	O

	ATOM	4471	CB	SER	B	240	80.544	60.356	61.687	1.00	19.75		C
	ATOM	4472	OG	SER	B	240	81.166	59.827	62.845	1.00	18.91		O
	ATOM	4473	N	PRO	B	241	79.895	63.621	60.066	1.00	19.53		N
	ATOM	4474	CA	PRO	B	241	79.162	64.146	58.921	1.00	20.71		C
5	ATOM	4475	C	PRO	B	241	79.806	64.007	57.558	1.00	20.64		C
	ATOM	4476	O	PRO	B	241	79.147	64.301	56.551	1.00	22.07		O
	ATOM	4477	CB	PRO	B	241	78.831	65.606	59.294	1.00	19.91		C
	ATOM	4478	CG	PRO	B	241	80.113	65.964	60.019	1.00	19.53		C
	ATOM	4479	CD	PRO	B	241	80.376	64.736	60.887	1.00	19.55		C
10	ATOM	4480	N	ASP	B	242	81.048	63.584	57.490	1.00	18.48		N
	ATOM	4481	CA	ASP	B	242	81.722	63.229	56.263	1.00	17.92		C
	ATOM	4482	C	ASP	B	242	82.564	61.990	56.594	1.00	18.21		C
	ATOM	4483	O	ASP	B	242	82.681	61.686	57.792	1.00	17.57		O
	ATOM	4484	CB	ASP	B	242	82.558	64.303	55.593	1.00	20.52		C
15	ATOM	4485	CG	ASP	B	242	83.556	65.012	56.472	1.00	27.92		C
	ATOM	4486	OD1	ASP	B	242	84.037	64.411	57.455	1.00	20.00		O
	ATOM	4487	OD2	ASP	B	242	83.877	66.193	56.178	1.00	22.02		O
	ATOM	4488	N	GLU	B	243	83.020	61.312	55.564	1.00	18.13		N
	ATOM	4489	CA	GLU	B	243	83.793	60.089	55.816	1.00	13.20		C
20	ATOM	4490	C	GLU	B	243	85.141	60.306	56.431	1.00	21.87		C
	ATOM	4491	O	GLU	B	243	85.600	59.439	57.192	1.00	18.81		O
	ATOM	4492	CB	GLU	B	243	83.824	59.242	54.533	1.00	17.00		C
	ATOM	4493	CG	GLU	B	243	82.417	58.789	54.159	1.00	16.21		C
	ATOM	4494	CD	GLU	B	243	81.840	57.737	55.108	1.00	19.62		C
25	ATOM	4495	OE1	GLU	B	243	82.484	56.677	55.223	1.00	18.36		O
	ATOM	4496	OE2	GLU	B	243	80.797	57.993	55.701	1.00	15.08		O
	ATOM	4497	N	SER	B	244	85.841	61.433	56.247	1.00	16.18		N
	ATOM	4498	CA	SER	B	244	87.140	61.627	56.880	1.00	20.14		C
	ATOM	4499	C	SER	B	244	86.919	61.676	58.392	1.00	21.14		C
30	ATOM	4500	O	SER	B	244	87.711	61.092	59.135	1.00	18.74		O
	ATOM	4501	CB	SER	B	244	87.780	62.927	56.410	1.00	21.94		C
	ATOM	4502	OG	SER	B	244	88.857	63.321	57.246	1.00	22.91		O
	ATOM	4503	N	ARG	B	245	85.857	62.334	58.815	1.00	21.95		N
	ATOM	4504	CA	ARG	B	245	85.576	62.480	60.229	1.00	24.46		C
35	ATOM	4505	C	ARG	B	245	85.093	61.160	60.826	1.00	25.03		C
	ATOM	4506	O	ARG	B	245	85.457	60.863	61.970	1.00	22.74		O
	ATOM	4507	CB	ARG	B	245	84.607	63.628	60.522	1.00	22.43		C
	ATOM	4508	CG	ARG	B	245	85.326	65.003	60.416	1.00	20.04		C
	ATOM	4509	CD	ARG	B	245	84.286	66.080	60.770	1.00	23.38		C
40	ATOM	4510	NE	ARG	B	245	83.742	66.531	59.487	1.00	25.92		N
	ATOM	4511	CZ	ARG	B	245	83.046	67.651	59.310	1.00	31.16		C
	ATOM	4512	NH1	ARG	B	245	82.755	68.449	60.324	1.00	27.40		N
	ATOM	4513	NH2	ARG	B	245	82.611	67.940	58.082	1.00	20.28		N
	ATOM	4514	N	TYR	B	246	84.326	60.401	60.034	1.00	21.70		N
45	ATOM	4515	CA	TYR	B	246	83.846	59.101	60.505	1.00	21.93		C
	ATOM	4516	C	TYR	B	246	85.045	58.214	60.834	1.00	22.04		C
	ATOM	4517	O	TYR	B	246	85.134	57.627	61.913	1.00	17.94		O
	ATOM	4518	CB	TYR	B	246	82.952	58.421	59.464	1.00	20.67		C
	ATOM	4519	CG	TYR	B	246	82.500	57.013	59.837	1.00	17.47		C
50	ATOM	4520	CD1	TYR	B	246	82.012	56.711	61.087	1.00	16.32		C
	ATOM	4521	CD2	TYR	B	246	82.590	56.036	58.862	1.00	13.90		C
	ATOM	4522	CE1	TYR	B	246	81.592	55.408	61.386	1.00	16.81		C
	ATOM	4523	CE2	TYR	B	246	82.191	54.734	59.143	1.00	16.56		C
	ATOM	4524	CZ	TYR	B	246	81.735	54.446	60.413	1.00	20.55		C
55	ATOM	4525	OH	TYR	B	246	81.362	53.141	60.701	1.00	15.95		O
	ATOM	4526	N	ALA	B	247	85.995	58.146	59.929	1.00	18.03		N
	ATOM	4527	CA	ALA	B	247	87.244	57.423	60.003	1.00	20.86		C
	ATOM	4528	C	ALA	B	247	87.991	57.842	61.276	1.00	20.26		C
	ATOM	4529	O	ALA	B	247	88.391	57.011	62.071	1.00	21.88		O

	ATOM	4530	CB	ALA	B	247	88.147	57.635	58.805	1.00	19.65	C
	ATOM	4531	N	THR	B	248	88.113	59.154	61.499	1.00	21.15	N
	ATOM	4532	CA	THR	B	248	88.812	59.566	62.735	1.00	21.86	C
	ATOM	4533	C	THR	B	248	88.071	59.138	63.978	1.00	18.72	C
5	ATOM	4534	O	THR	B	248	88.707	58.749	64.973	1.00	22.28	O
	ATOM	4535	CB	THR	B	248	88.987	61.098	62.679	1.00	16.96	C
	ATOM	4536	OG1	THR	B	248	89.909	61.383	61.646	1.00	20.38	O
	ATOM	4537	CG2	THR	B	248	89.525	61.609	64.019	1.00	21.61	C
	ATOM	4538	N	ASN	B	249	86.757	59.205	64.008	1.00	16.99	N
10	ATOM	4539	CA	ASN	B	249	85.951	58.832	65.160	1.00	18.48	C
	ATOM	4540	C	ASN	B	249	86.076	57.327	65.390	1.00	22.24	O
	ATOM	4541	O	ASN	B	249	86.310	56.931	66.529	1.00	18.80	O
	ATOM	4542	CB	ASN	B	249	84.503	59.259	64.948	1.00	24.07	C
	ATOM	4543	CG	ASN	B	249	84.429	60.787	64.892	1.00	23.08	C
15	ATOM	4544	OD1	ASN	B	249	85.320	61.484	65.353	1.00	23.66	O
	ATOM	4545	ND2	ASN	B	249	83.297	61.244	64.379	1.00	19.45	N
	ATOM	4546	N	ILE	B	250	85.997	56.509	64.341	1.00	20.93	N
	ATOM	4547	CA	ILE	B	250	86.164	55.064	64.633	1.00	17.50	C
	ATOM	4548	C	ILE	B	250	87.566	54.751	65.123	1.00	18.42	C
20	ATOM	4549	O	ILE	B	250	87.767	53.941	66.061	1.00	23.75	O
	ATOM	4550	CB	ILE	B	250	85.780	54.209	63.421	1.00	15.48	C
	ATOM	4551	CG1	ILE	B	250	84.274	54.216	63.241	1.00	17.22	C
	ATOM	4552	CG2	ILE	B	250	86.322	52.783	63.614	1.00	13.80	C
	ATOM	4553	CD1	ILE	B	250	83.405	53.287	64.039	1.00	18.66	C
25	ATOM	4554	N	ALA	B	251	88.598	55.345	64.535	1.00	17.26	N
	ATOM	4555	CA	ALA	B	251	89.988	55.092	64.920	1.00	18.33	C
	ATOM	4556	C	ALA	B	251	90.157	55.460	66.394	1.00	19.88	C
	ATOM	4557	O	ALA	B	251	90.787	54.730	67.157	1.00	18.65	O
	ATOM	4558	CB	ALA	B	251	90.939	55.868	64.042	1.00	17.72	C
30	ATOM	4559	N	ASN	B	252	89.572	56.591	66.785	1.00	18.07	N
	ATOM	4560	CA	ASN	B	252	89.623	56.975	68.203	1.00	17.37	C
	ATOM	4561	C	ASN	B	252	89.035	55.876	69.094	1.00	23.95	C
	ATOM	4562	O	ASN	B	252	89.667	55.562	70.105	1.00	21.93	O
	ATOM	4563	CB	ASN	B	252	88.926	58.310	68.433	1.00	21.38	C
35	ATOM	4564	CG	ASN	B	252	89.731	59.490	67.902	1.00	24.79	C
	ATOM	4565	OD1	ASN	B	252	90.894	59.386	67.516	1.00	23.42	O
	ATOM	4566	ND2	ASN	B	252	89.081	60.663	67.888	1.00	23.22	N
	ATOM	4567	N	ALA	B	253	87.873	55.317	68.780	1.00	18.25	N
	ATOM	4568	CA	ALA	B	253	87.318	54.232	69.622	1.00	20.03	C
40	ATOM	4569	C	ALA	B	253	88.192	52.998	69.551	1.00	22.96	C
	ATOM	4570	O	ALA	B	253	88.501	52.365	70.570	1.00	22.86	O
	ATOM	4571	CB	ALA	B	253	85.934	53.901	69.054	1.00	20.69	C
	ATOM	4572	N	MET	B	254	88.698	52.639	68.358	1.00	15.53	N
	ATOM	4573	CA	MET	B	254	89.563	51.497	68.183	1.00	18.63	C
45	ATOM	4574	C	MET	B	254	90.884	51.601	68.934	1.00	25.70	C
	ATOM	4575	O	MET	B	254	91.377	50.658	69.568	1.00	18.30	O
	ATOM	4576	CB	MET	B	254	89.891	51.236	66.688	1.00	17.39	C
	ATOM	4577	CG	MET	B	254	88.669	51.001	65.833	1.00	18.39	C
	ATOM	4578	SD	MET	B	254	87.924	49.373	66.273	1.00	17.66	S
50	ATOM	4579	CE	MET	B	254	86.459	49.553	65.268	1.00	20.05	C
	ATOM	4580	N	ARG	B	255	91.460	52.806	68.953	1.00	17.46	N
	ATOM	4581	CA	ARG	B	255	92.758	52.993	69.624	1.00	17.68	C
	ATOM	4582	C	ARG	B	255	92.716	52.734	71.115	1.00	16.19	C
	ATOM	4583	O	ARG	B	255	93.642	52.099	71.652	1.00	20.59	O
55	ATOM	4584	CB	ARG	B	255	93.236	54.416	69.294	1.00	20.26	C
	ATOM	4585	CG	ARG	B	255	94.571	54.756	69.920	1.00	22.42	C
	ATOM	4586	CD	ARG	B	255	95.046	56.177	69.563	1.00	18.77	C
	ATOM	4587	NE	ARG	B	255	94.961	56.385	68.122	1.00	22.61	N
	ATOM	4588	CZ	ARG	B	255	94.034	57.163	67.563	1.00	19.19	C

	ATOM	4589	NH1	ARG	B	255	93.114	57.776	68.290	1.00	24.62	N
	ATOM	4590	NH2	ARG	B	255	94.000	57.265	66.235	1.00	22.17	N
	ATOM	4591	N	GLN	B	256	91.609	53.085	71.747	1.00	19.29	N
	ATOM	4592	CA	GLN	B	256	91.386	52.922	73.171	1.00	20.77	C
5	ATOM	4593	C	GLN	B	256	91.249	51.452	73.561	1.00	27.72	C
	ATOM	4594	O	GLN	B	256	91.450	51.090	74.721	1.00	28.03	O
	ATOM	4595	CB	GLN	B	256	90.108	53.645	73.572	1.00	23.65	C
	ATOM	4596	CG	GLN	B	256	90.199	55.157	73.583	1.00	25.96	C
	ATOM	4597	CD	GLN	B	256	88.817	55.719	73.918	1.00	29.96	C
10	ATOM	4598	OE1	GLN	B	256	88.445	55.660	75.100	1.00	28.44	O
	ATOM	4599	NE2	GLN	B	256	88.148	56.199	72.894	1.00	33.23	N
	ATOM	4600	N	ARG	B	257	90.881	50.620	72.582	1.00	22.52	N
	ATOM	4601	CA	ARG	B	257	90.759	49.192	72.787	1.00	18.53	C
	ATOM	4602	C	ARG	B	257	91.938	48.414	72.222	1.00	25.19	C
15	ATOM	4603	O	ARG	B	257	91.978	47.169	72.260	1.00	25.60	O
	ATOM	4604	CB	ARG	B	257	89.434	48.704	72.155	1.00	15.54	C
	ATOM	4605	CG	ARG	B	257	88.158	49.344	72.603	1.00	21.95	C
	ATOM	4606	CD	ARG	B	257	86.940	48.932	71.771	1.00	21.22	C
	ATOM	4607	NE	ARG	B	257	85.701	49.434	72.374	1.00	21.40	N
20	ATOM	4608	CZ	ARG	B	257	84.770	48.681	72.962	1.00	17.04	C
	ATOM	4609	NH1	ARG	B	257	84.937	47.355	73.034	1.00	18.04	N
	ATOM	4610	NH2	ARG	B	257	83.688	49.216	73.464	1.00	20.59	N
	ATOM	4611	N	GLY	B	258	92.970	49.052	71.671	1.00	18.10	N
	ATOM	4612	CA	GLY	B	258	94.132	48.442	71.124	1.00	18.57	C
25	ATOM	4613	C	GLY	B	258	93.982	47.778	69.767	1.00	25.57	C
	ATOM	4614	O	GLY	B	258	94.725	46.876	69.383	1.00	23.23	O
	ATOM	4615	N	LEU	B	259	92.983	48.247	69.022	1.00	21.02	N
	ATOM	4616	CA	LEU	B	259	92.663	47.659	67.714	1.00	20.21	C
	ATOM	4617	C	LEU	B	259	93.165	48.547	66.601	1.00	23.47	C
30	ATOM	4618	O	LEU	B	259	93.520	49.710	66.835	1.00	22.18	O
	ATOM	4619	CB	LEU	B	259	91.131	47.552	67.707	1.00	17.78	C
	ATOM	4620	CG	LEU	B	259	90.521	46.633	68.776	1.00	24.62	C
	ATOM	4621	CD1	LEU	B	259	89.009	46.719	68.792	1.00	23.42	C
	ATOM	4622	CD2	LEU	B	259	90.994	45.203	68.523	1.00	29.45	C
35	ATOM	4623	N	PRO	B	260	93.130	48.065	65.382	1.00	20.15	N
	ATOM	4624	CA	PRO	B	260	93.529	48.786	64.187	1.00	20.61	C
	ATOM	4625	C	PRO	B	260	92.744	50.082	64.006	1.00	18.29	C
	ATOM	4626	O	PRO	B	260	91.636	50.251	64.507	1.00	20.65	O
	ATOM	4627	CB	PRO	B	260	93.341	47.801	63.018	1.00	20.96	C
40	ATOM	4628	CG	PRO	B	260	93.530	46.497	63.777	1.00	20.35	C
	ATOM	4629	CD	PRO	B	260	92.747	46.669	65.064	1.00	18.86	C
	ATOM	4630	N	THR	B	261	93.364	51.040	63.322	1.00	20.56	N
	ATOM	4631	CA	THR	B	261	92.777	52.370	63.164	1.00	22.31	C
	ATOM	4632	C	THR	B	261	92.637	52.857	61.724	1.00	29.16	C
45	ATOM	4633	O	THR	B	261	92.116	53.964	61.491	1.00	26.56	O
	ATOM	4634	CB	THR	B	261	93.773	53.376	63.826	1.00	22.09	C
	ATOM	4635	OG1	THR	B	261	95.056	53.131	63.247	1.00	22.50	O
	ATOM	4636	CG2	THR	B	261	93.768	53.250	65.336	1.00	21.07	C
	ATOM	4637	N	GLN	B	262	93.150	52.131	60.751	1.00	17.49	N
50	ATOM	4638	CA	GLN	B	262	93.230	52.631	59.381	1.00	22.49	C
	ATOM	4639	C	GLN	B	262	92.056	52.337	58.467	1.00	26.06	C
	ATOM	4640	O	GLN	B	262	91.470	51.253	58.480	1.00	23.98	O
	ATOM	4641	CB	GLN	B	262	94.514	52.097	58.745	1.00	17.85	C
	ATOM	4642	CG	GLN	B	262	95.809	52.399	59.496	1.00	23.30	C
55	ATOM	4643	CD	GLN	B	262	95.927	53.919	59.725	1.00	18.41	C
	ATOM	4644	OE1	GLN	B	262	95.747	54.378	60.837	1.00	21.83	O
	ATOM	4645	NE2	GLN	B	262	96.207	54.610	58.633	1.00	24.59	N
	ATOM	4646	N	PHE	B	263	91.705	53.324	57.616	1.00	19.57	N
	ATOM	4647	CA	PHE	B	263	90.609	53.162	56.688	1.00	20.56	C

	ATOM	4648	C	PHE	B	263	91.016	53.271	55.222	1.00	19.01	C
	ATOM	4649	O	PHE	B	263	91.971	53.925	54.796	1.00	17.87	O
	ATOM	4650	CB	PHE	B	263	89.606	54.332	56.900	1.00	13.96	C
	ATOM	4651	CG	PHE	B	263	88.624	54.096	57.976	1.00	13.70	C
5	ATOM	4652	CD1	PHE	B	263	89.001	54.066	59.317	1.00	18.13	C
	ATOM	4653	CD2	PHE	B	263	87.278	53.888	57.681	1.00	16.32	C
	ATOM	4654	CE1	PHE	B	263	88.063	53.857	60.308	1.00	15.53	C
	ATOM	4655	CE2	PHE	B	263	86.339	53.631	58.665	1.00	22.27	C
	ATOM	4656	CZ	PHE	B	263	86.738	53.620	60.009	1.00	17.15	C
10	ATOM	4657	N	ILE	B	264	90.154	52.689	54.389	1.00	16.44	N
	ATOM	4658	CA	ILE	B	264	90.078	52.972	52.963	1.00	14.67	C
	ATOM	4659	C	ILE	B	264	88.632	53.444	52.759	1.00	18.83	C
	ATOM	4660	O	ILE	B	264	87.694	52.963	53.392	1.00	15.16	O
	ATOM	4661	CB	ILE	B	264	90.502	51.924	51.960	1.00	17.36	C
15	ATOM	4662	CG1	ILE	B	264	89.801	50.578	52.219	1.00	12.42	C
	ATOM	4663	CG2	ILE	B	264	92.023	51.758	51.922	1.00	16.92	C
	ATOM	4664	CD1	ILE	B	264	90.167	49.471	51.282	1.00	21.20	C
	ATOM	4665	N	ILE	B	265	88.431	54.530	52.024	1.00	13.66	N
	ATOM	4666	CA	ILE	B	265	87.103	55.132	51.874	1.00	14.44	C
20	ATOM	4667	C	ILE	B	265	86.702	55.132	50.415	1.00	16.12	C
	ATOM	4668	O	ILE	B	265	87.430	55.579	49.531	1.00	14.22	O
	ATOM	4669	CB	ILE	B	265	87.030	56.546	52.499	1.00	16.36	C
	ATOM	4670	CG1	ILE	B	265	87.156	56.412	54.028	1.00	17.93	C
	ATOM	4671	CG2	ILE	B	265	85.671	57.178	52.177	1.00	11.34	C
25	ATOM	4672	CD1	ILE	B	265	87.527	57.706	54.719	1.00	32.91	C
	ATOM	4673	N	ASP	B	266	85.496	54.580	50.125	1.00	14.62	N
	ATOM	4674	CA	ASP	B	266	85.067	54.528	48.738	1.00	12.31	C
	ATOM	4675	C	ASP	B	266	84.567	55.926	48.329	1.00	15.66	C
	ATOM	4676	O	ASP	B	266	83.870	56.550	49.118	1.00	14.39	O
30	ATOM	4677	CB	ASP	B	266	83.853	53.587	48.624	1.00	13.98	C
	ATOM	4678	CG	ASP	B	266	83.447	53.191	47.228	1.00	12.35	C
	ATOM	4679	OD1	ASP	B	266	84.072	53.622	46.233	1.00	12.31	O
	ATOM	4680	OD2	ASP	B	266	82.482	52.385	47.141	1.00	12.07	O
	ATOM	4681	N	GLN	B	267	84.963	56.354	47.130	1.00	13.29	N
35	ATOM	4682	CA	GLN	B	267	84.397	57.580	46.562	1.00	12.36	C
	ATOM	4683	C	GLN	B	267	83.959	57.320	45.136	1.00	16.31	C
	ATOM	4684	O	GLN	B	267	83.874	58.239	44.299	1.00	13.76	O
	ATOM	4685	CB	GLN	B	267	85.318	58.792	46.591	1.00	11.72	C
	ATOM	4686	CG	GLN	B	267	85.624	59.350	47.970	1.00	16.66	C
40	ATOM	4687	CD	GLN	B	267	84.495	60.168	48.541	1.00	17.67	C
	ATOM	4688	OE1	GLN	B	267	84.362	61.389	48.308	1.00	18.52	O
	ATOM	4689	NE2	GLN	B	267	83.667	59.527	49.367	1.00	16.26	N
	ATOM	4690	N	SER	B	268	83.606	56.064	44.794	1.00	12.12	N
	ATOM	4691	CA	SER	B	268	83.135	55.714	43.472	1.00	13.53	C
45	ATOM	4692	C	SER	B	268	81.933	56.564	43.051	1.00	13.38	C
	ATOM	4693	O	SER	B	268	81.773	56.916	41.897	1.00	12.66	O
	ATOM	4694	CB	SER	B	268	82.677	54.246	43.416	1.00	12.82	C
	ATOM	4695	OG	SER	B	268	81.788	54.024	44.520	1.00	13.85	O
	ATOM	4696	N	ARG	B	269	81.035	56.843	43.976	1.00	14.34	N
50	ATOM	4697	CA	ARG	B	269	79.865	57.678	43.732	1.00	12.27	C
	ATOM	4698	C	ARG	B	269	79.701	58.680	44.863	1.00	13.37	C
	ATOM	4699	O	ARG	B	269	79.838	58.316	46.041	1.00	15.59	O
	ATOM	4700	CB	ARG	B	269	78.577	56.826	43.677	1.00	12.81	C
	ATOM	4701	CG	ARG	B	269	78.638	55.757	42.577	1.00	13.14	C
55	ATOM	4702	CD	ARG	B	269	77.348	54.948	42.459	1.00	14.78	C
	ATOM	4703	NE	ARG	B	269	77.138	54.162	43.692	1.00	13.58	N
	ATOM	4704	CZ	ARG	B	269	76.098	53.362	43.885	1.00	15.13	C
	ATOM	4705	NH1	ARG	B	269	75.239	53.220	42.872	1.00	13.64	N
	ATOM	4706	NH2	ARG	B	269	75.941	52.716	45.055	1.00	14.12	N

	ATOM	4707	N	VAL	B	270	79.450	59.965	44.572	1.00 11.08	N
	ATOM	4708	CA	VAL	B	270	79.220	60.960	45.622	1.00 15.78	C
	ATOM	4709	C	VAL	B	270	77.922	61.683	45.289	1.00 14.22	C
	ATOM	4710	O	VAL	B	270	77.683	62.069	44.123	1.00 14.63	O
5	ATOM	4711	CB	VAL	B	270	80.396	61.948	45.739	1.00 15.78	C
	ATOM	4712	CG1	VAL	B	270	80.112	63.059	46.732	1.00 17.62	C
	ATOM	4713	CG2	VAL	B	270	81.698	61.216	46.150	1.00 16.79	C
	ATOM	4714	N	ALA	B	271	76.995	61.815	46.225	1.00 13.05	N
	ATOM	4715	CA	ALA	B	271	75.731	62.478	45.926	1.00 12.38	C
10	ATOM	4716	C	ALA	B	271	75.874	63.987	45.850	1.00 17.18	C
	ATOM	4717	O	ALA	B	271	76.680	64.586	46.587	1.00 20.63	O
	ATOM	4718	CB	ALA	B	271	74.769	62.156	47.096	1.00 13.94	C
	ATOM	4719	N	LEU	B	272	75.065	64.598	44.958	1.00 16.98	N
	ATOM	4720	CA	LEU	B	272	75.024	66.072	44.969	1.00 24.18	C
15	ATOM	4721	C	LEU	B	272	74.209	66.579	46.151	1.00 23.47	C
	ATOM	4722	O	LEU	B	272	73.377	65.881	46.759	1.00 24.74	O
	ATOM	4723	CB	LEU	B	272	74.379	66.603	43.680	1.00 21.83	C
	ATOM	4724	CG	LEU	B	272	74.884	66.139	42.328	1.00 31.92	C
	ATOM	4725	CD1	LEU	B	272	74.547	67.178	41.245	1.00 24.20	C
20	ATOM	4726	CD2	LEU	B	272	76.376	65.868	42.313	1.00 30.13	C
	ATOM	4727	N	SER	B	273	74.464	67.830	46.586	1.00 29.62	N
	ATOM	4728	CA	SER	B	273	73.681	68.382	47.696	1.00 32.76	C
	ATOM	4729	C	SER	B	273	72.195	68.333	47.341	1.00 27.46	C
	ATOM	4730	O	SER	B	273	71.805	68.780	46.260	1.00 27.26	O
25	ATOM	4731	CB	SER	B	273	74.033	69.813	48.083	1.00 36.21	C
	ATOM	4732	OG	SER	B	273	75.439	69.961	48.150	1.00 40.72	O
	ATOM	4733	N	GLY	B	274	71.409	67.858	48.288	1.00 26.91	N
	ATOM	4734	CA	GLY	B	274	69.990	67.671	48.146	1.00 25.28	C
	ATOM	4735	C	GLY	B	274	69.530	66.376	47.545	1.00 25.72	C
30	ATOM	4736	O	GLY	B	274	68.312	66.199	47.480	1.00 31.28	O
	ATOM	4737	N	ALA	B	275	70.374	65.443	47.085	1.00 19.25	N
	ATOM	4738	CA	ALA	B	275	69.891	64.234	46.418	1.00 20.46	C
	ATOM	4739	C	ALA	B	275	69.075	63.304	47.297	1.00 22.81	C
	ATOM	4740	O	ALA	B	275	68.142	62.608	46.889	1.00 23.98	O
35	ATOM	4741	CB	ALA	B	275	71.080	63.488	45.811	1.00 22.82	C
	ATOM	4742	N	ARG	B	276	69.503	63.229	48.572	1.00 24.55	N
	ATOM	4743	CA	ARG	B	276	68.787	62.401	49.533	1.00 21.37	C
	ATOM	4744	C	ARG	B	276	68.081	63.258	50.581	1.00 16.59	C
	ATOM	4745	O	ARG	B	276	68.673	64.155	51.190	1.00 21.69	O
40	ATOM	4746	CB	ARG	B	276	69.768	61.504	50.338	1.00 17.11	C
	ATOM	4747	CG	ARG	B	276	70.402	60.465	49.439	1.00 17.37	C
	ATOM	4748	CD	ARG	B	276	71.283	59.517	50.245	1.00 18.12	C
	ATOM	4749	NE	ARG	B	276	72.595	60.136	50.504	1.00 22.72	N
	ATOM	4750	CZ	ARG	B	276	73.613	59.419	51.016	1.00 22.19	C
45	ATOM	4751	NH1	ARG	B	276	73.350	58.151	51.305	1.00 20.30	N
	ATOM	4752	NH2	ARG	B	276	74.781	59.988	51.209	1.00 20.97	N
	ATOM	4753	N	SER	B	277	66.841	62.835	50.883	1.00 18.66	N
	ATOM	4754	CA	SER	B	277	66.154	63.554	51.962	1.00 22.06	C
	ATOM	4755	C	SER	B	277	66.502	62.870	53.289	1.00 28.16	C
50	ATOM	4756	O	SER	B	277	66.397	63.504	54.335	1.00 31.85	O
	ATOM	4757	CB	SER	B	277	64.643	63.547	51.741	1.00 34.95	C
	ATOM	4758	OG	SER	B	277	64.206	62.271	51.329	1.00 36.51	O
	ATOM	4759	N	GLU	B	278	66.827	61.575	53.217	1.00 21.65	N
	ATOM	4760	CA	GLU	B	278	67.207	60.828	54.415	1.00 25.67	C
55	ATOM	4761	C	GLU	B	278	68.593	60.195	54.195	1.00 20.70	C
	ATOM	4762	O	GLU	B	278	68.900	59.690	53.109	1.00 20.38	O
	ATOM	4763	CB	GLU	B	278	66.175	59.758	54.763	1.00 24.88	C
	ATOM	4764	CG	GLU	B	278	64.889	60.288	55.393	1.00 39.32	C
	ATOM	4765	CD	GLU	B	278	63.837	59.185	55.355	1.00 49.61	C

	ATOM	4766	OE1	GLU	B	278	63.547	58.733	54.226	1.00	52.41	O
	ATOM	4767	OE2	GLU	B	278	63.335	58.777	56.419	1.00	60.57	O
	ATOM	4768	N	TRP	B	279	69.376	60.134	55.266	1.00	18.34	N
	ATOM	4769	CA	TRP	B	279	70.739	59.628	55.170	1.00	17.14	C
5	ATOM	4770	C	TRP	B	279	70.786	58.146	54.779	1.00	18.27	C
	ATOM	4771	O	TRP	B	279	71.724	57.717	54.116	1.00	21.89	O
	ATOM	4772	CB	TRP	B	279	71.519	59.831	56.465	1.00	20.35	C
	ATOM	4773	CG	TRP	B	279	73.009	59.958	56.306	1.00	22.96	C
	ATOM	4774	CD1	TRP	B	279	73.797	59.680	55.225	1.00	17.88	C
10	ATOM	4775	CD2	TRP	B	279	73.894	60.447	57.314	1.00	17.12	C
	ATOM	4776	NE1	TRP	B	279	75.100	59.932	55.515	1.00	17.15	N
	ATOM	4777	CE2	TRP	B	279	75.208	60.429	56.797	1.00	19.55	C
	ATOM	4778	CE3	TRP	B	279	73.713	60.838	58.654	1.00	15.78	C
	ATOM	4779	CZ2	TRP	B	279	76.330	60.794	57.534	1.00	16.75	C
15	ATOM	4780	CZ3	TRP	B	279	74.810	61.250	59.361	1.00	20.70	C
	ATOM	4781	CH2	TRP	B	279	76.099	61.231	58.827	1.00	14.86	C
	ATOM	4782	N	GLY	B	280	69.777	57.387	55.211	1.00	21.03	N
	ATOM	4783	CA	GLY	B	280	69.756	55.964	54.906	1.00	20.84	C
	ATOM	4784	C	GLY	B	280	69.462	55.576	53.469	1.00	25.19	C
20	ATOM	4785	O	GLY	B	280	69.573	54.374	53.175	1.00	21.44	O
	ATOM	4786	N	GLN	B	281	69.059	56.510	52.617	1.00	22.17	N
	ATOM	4787	CA	GLN	B	281	68.731	56.154	51.229	1.00	18.91	C
	ATOM	4788	C	GLN	B	281	70.001	55.609	50.570	1.00	19.28	C
	ATOM	4789	O	GLN	B	281	71.078	56.147	50.744	1.00	17.79	O
25	ATOM	4790	CB	GLN	B	281	68.184	57.375	50.504	1.00	23.41	C
	ATOM	4791	CG	GLN	B	281	66.691	57.638	50.745	1.00	29.18	C
	ATOM	4792	CD	GLN	B	281	66.288	58.876	49.952	1.00	43.17	C
	ATOM	4793	OE1	GLN	B	281	66.607	58.938	48.756	1.00	46.46	O
	ATOM	4794	NE2	GLN	B	281	65.625	59.831	50.578	1.00	48.62	N
30	ATOM	4795	N	TRP	B	282	69.846	54.485	49.872	1.00	17.84	N
	ATOM	4796	CA	TRP	B	282	71.024	53.830	49.288	1.00	15.47	C
	ATOM	4797	C	TRP	B	282	70.895	53.356	47.865	1.00	13.97	C
	ATOM	4798	O	TRP	B	282	71.961	53.156	47.234	1.00	14.89	O
	ATOM	4799	CB	TRP	B	282	71.378	52.597	50.171	1.00	15.87	C
35	ATOM	4800	CG	TRP	B	282	70.260	51.623	50.330	1.00	17.68	C
	ATOM	4801	CD1	TRP	B	282	69.266	51.681	51.270	1.00	19.19	C
	ATOM	4802	CD2	TRP	B	282	69.985	50.470	49.520	1.00	16.68	C
	ATOM	4803	NE1	TRP	B	282	68.410	50.595	51.107	1.00	21.00	N
	ATOM	4804	CE2	TRP	B	282	68.828	49.858	50.032	1.00	23.86	C
40	ATOM	4805	CE3	TRP	B	282	70.612	49.905	48.404	1.00	16.62	C
	ATOM	4806	CZ2	TRP	B	282	68.266	48.700	49.482	1.00	18.80	C
	ATOM	4807	CZ3	TRP	B	282	70.060	48.758	47.860	1.00	19.39	C
	ATOM	4808	CH2	TRP	B	282	68.921	48.166	48.400	1.00	20.13	C
	ATOM	4809	N	CYS	B	283	69.692	53.076	47.347	1.00	12.68	N
45	ATOM	4810	CA	CYS	B	283	69.582	52.471	46.026	1.00	14.66	C
	ATOM	4811	C	CYS	B	283	69.553	53.452	44.864	1.00	12.13	C
	ATOM	4812	O	CYS	B	283	68.673	54.255	44.725	1.00	13.82	O
	ATOM	4813	CB	CYS	B	283	68.244	51.668	46.012	1.00	17.06	C
	ATOM	4814	SG	CYS	B	283	68.140	50.674	44.507	1.00	14.06	S
50	ATOM	4815	N	ASN	B	284	70.620	53.380	44.070	1.00	13.37	N
	ATOM	4816	CA	ASN	B	284	70.767	54.190	42.855	1.00	14.56	C
	ATOM	4817	C	ASN	B	284	70.366	55.640	43.073	1.00	14.31	C
	ATOM	4818	O	ASN	B	284	69.482	56.192	42.403	1.00	15.21	O
	ATOM	4819	CB	ASN	B	284	69.940	53.566	41.726	1.00	12.20	C
55	ATOM	4820	CG	ASN	B	284	70.316	52.135	41.425	1.00	16.26	C
	ATOM	4821	OD1	ASN	B	284	71.465	51.700	41.358	1.00	15.41	O
	ATOM	4822	ND2	ASN	B	284	69.314	51.298	41.223	1.00	18.26	N
	ATOM	4823	N	VAL	B	285	71.078	56.226	44.027	1.00	13.81	N
	ATOM	4824	CA	VAL	B	285	70.833	57.605	44.418	1.00	14.84	C

	ATOM	4825	C	VAL	B	285	71.176	58.547	43.281	1.00 17.91	C
	ATOM	4826	O	VAL	B	285	72.205	58.439	42.610	1.00 16.75	O
	ATOM	4827	CB	VAL	B	285	71.569	58.000	45.709	1.00 11.45	C
	ATOM	4828	CG1	VAL	B	285	71.336	59.495	45.973	1.00 13.91	C
5	ATOM	4829	CG2	VAL	B	285	70.959	57.145	46.827	1.00 16.29	C
	ATOM	4830	N	ASN	B	286	70.250	59.504	43.071	1.00 16.29	N
	ATOM	4831	CA	ASN	B	286	70.476	60.470	41.979	1.00 16.54	C
	ATOM	4832	C	ASN	B	286	69.860	61.799	42.348	1.00 15.52	C
	ATOM	4833	O	ASN	B	286	68.892	61.807	43.106	1.00 15.21	O
10	ATOM	4834	CB	ASN	B	286	69.912	59.916	40.678	1.00 18.51	C
	ATOM	4835	CG	ASN	B	286	68.438	59.597	40.666	1.00 23.49	C
	ATOM	4836	OD1	ASN	B	286	67.883	58.810	41.424	1.00 24.91	O
	ATOM	4837	ND2	ASN	B	286	67.727	60.222	39.732	1.00 26.12	N
	ATOM	4838	N	PRO	B	287	70.520	62.886	41.991	1.00 16.84	N
15	ATOM	4839	CA	PRO	B	287	71.731	62.923	41.204	1.00 15.33	C
	ATOM	4840	C	PRO	B	287	73.023	62.608	41.969	1.00 20.76	C
	ATOM	4841	O	PRO	B	287	73.191	62.979	43.119	1.00 18.29	O
	ATOM	4842	CB	PRO	B	287	71.862	64.412	40.768	1.00 17.77	C
	ATOM	4843	CG	PRO	B	287	71.057	65.157	41.796	1.00 24.90	C
20	ATOM	4844	CD	PRO	B	287	69.996	64.231	42.347	1.00 20.11	C
	ATOM	4845	N	ALA	B	288	73.980	62.004	41.291	1.00 16.07	N
	ATOM	4846	CA	ALA	B	288	75.293	61.699	41.890	1.00 12.92	C
	ATOM	4847	C	ALA	B	288	76.345	61.834	40.776	1.00 12.89	C
	ATOM	4848	O	ALA	B	288	75.981	61.765	39.585	1.00 13.94	O
25	ATOM	4849	CB	ALA	B	288	75.199	60.257	42.410	1.00 16.57	C
	ATOM	4850	N	GLY	B	289	77.608	61.805	41.206	1.00 14.38	N
	ATOM	4851	CA	GLY	B	289	78.717	61.872	40.264	1.00 14.79	C
	ATOM	4852	C	GLY	B	289	79.871	60.943	40.685	1.00 16.05	C
	ATOM	4853	O	GLY	B	289	79.944	60.554	41.862	1.00 16.87	O
30	ATOM	4854	N	PHE	B	290	80.701	60.568	39.715	1.00 12.12	N
	ATOM	4855	CA	PHE	B	290	81.926	59.862	40.087	1.00 14.57	C
	ATOM	4856	C	PHE	B	290	82.690	60.736	41.070	1.00 14.55	C
	ATOM	4857	O	PHE	B	290	82.795	61.976	40.885	1.00 15.82	O
	ATOM	4858	CB	PHE	B	290	82.840	59.632	38.887	1.00 14.56	C
35	ATOM	4859	CG	PHE	B	290	82.401	58.646	37.873	1.00 12.24	C
	ATOM	4860	CD1	PHE	B	290	81.898	57.403	38.281	1.00 17.69	C
	ATOM	4861	CD2	PHE	B	290	82.526	58.900	36.526	1.00 14.49	C
	ATOM	4862	CE1	PHE	B	290	81.516	56.477	37.329	1.00 15.94	C
	ATOM	4863	CE2	PHE	B	290	82.125	57.966	35.579	1.00 14.72	C
40	ATOM	4864	CZ	PHE	B	290	81.604	56.744	35.971	1.00 13.26	C
	ATOM	4865	N	GLY	B	291	83.254	60.153	42.134	1.00 14.32	N
	ATOM	4866	CA	GLY	B	291	84.080	60.878	43.097	1.00 13.56	C
	ATOM	4867	C	GLY	B	291	85.575	60.795	42.756	1.00 14.72	C
	ATOM	4868	O	GLY	B	291	86.021	60.309	41.725	1.00 16.84	O
45	ATOM	4869	N	GLN	B	292	86.344	61.367	43.673	1.00 16.20	N
	ATOM	4870	CA	GLN	B	292	87.785	61.417	43.454	1.00 19.01	C
	ATOM	4871	C	GLN	B	292	88.333	60.028	43.217	1.00 18.50	C
	ATOM	4872	O	GLN	B	292	88.113	59.157	44.037	1.00 20.58	O
	ATOM	4873	CB	GLN	B	292	88.381	61.895	44.786	1.00 16.55	C
50	ATOM	4874	CG	GLN	B	292	89.820	61.601	45.118	1.00 30.27	C
	ATOM	4875	CD	GLN	B	292	90.769	62.538	44.403	1.00 36.94	C
	ATOM	4876	OE1	GLN	B	292	90.717	63.747	44.626	1.00 34.55	O
	ATOM	4877	NE2	GLN	B	292	91.611	61.962	43.560	1.00 29.92	N
	ATOM	4878	N	PRO	B	293	89.086	59.843	42.167	1.00 17.71	N
55	ATOM	4879	CA	PRO	B	293	89.803	58.622	41.871	1.00 19.36	C
	ATOM	4880	C	PRO	B	293	90.854	58.335	42.942	1.00 18.36	C
	ATOM	4881	O	PRO	B	293	91.326	59.167	43.712	1.00 18.12	O
	ATOM	4882	CB	PRO	B	293	90.531	58.845	40.536	1.00 21.73	C
	ATOM	4883	CG	PRO	B	293	89.645	59.932	39.937	1.00 24.28	C

	ATOM	4884	CD	PRO	B	293	89.302	60.841	41.102	1.00 20.17	C
	ATOM	4885	N	PHE	B	294	91.261	57.059	43.006	1.00 16.57	N
	ATOM	4886	CA	PHE	B	294	92.215	56.553	43.924	1.00 16.15	C
	ATOM	4887	C	PHE	B	294	93.376	57.526	44.216	1.00 16.82	C
5	ATOM	4888	O	PHE	B	294	93.996	57.979	43.250	1.00 20.81	O
	ATOM	4889	CB	PHE	B	294	92.804	55.227	43.384	1.00 16.83	C
	ATOM	4890	CG	PHE	B	294	94.109	54.894	44.060	1.00 23.44	C
	ATOM	4891	CD1	PHE	B	294	94.122	54.537	45.393	1.00 21.32	C
	ATOM	4892	CD2	PHE	B	294	95.305	55.006	43.364	1.00 18.05	C
10	ATOM	4893	CE1	PHE	B	294	95.325	54.251	46.024	1.00 25.41	C
	ATOM	4894	CE2	PHE	B	294	96.510	54.726	43.995	1.00 18.84	C
	ATOM	4895	CZ	PHE	B	294	96.515	54.361	45.327	1.00 18.69	C
	ATOM	4896	N	THR	B	295	93.628	57.702	45.484	1.00 15.75	N
	ATOM	4897	CA	THR	B	295	94.797	58.491	45.902	1.00 19.31	C
15	ATOM	4898	C	THR	B	295	95.174	58.162	47.341	1.00 23.18	C
	ATOM	4899	O	THR	B	295	94.333	57.930	48.215	1.00 22.10	O
	ATOM	4900	CB	THR	B	295	94.546	59.993	45.778	1.00 16.87	C
	ATOM	4901	OG1	THR	B	295	95.759	60.706	46.216	1.00 20.58	O
	ATOM	4902	CG2	THR	B	295	93.476	60.529	46.701	1.00 23.09	C
20	ATOM	4903	N	THR	B	296	96.462	58.245	47.649	1.00 19.25	N
	ATOM	4904	CA	THR	B	296	97.022	58.148	48.983	1.00 19.89	C
	ATOM	4905	C	THR	B	296	97.117	59.554	49.589	1.00 23.47	C
	ATOM	4906	O	THR	B	296	97.290	59.735	50.797	1.00 26.59	O
	ATOM	4907	CB	THR	B	296	98.393	57.455	48.999	1.00 30.30	C
25	ATOM	4908	OG1	THR	B	296	99.329	58.080	48.102	1.00 27.34	O
	ATOM	4909	CG2	THR	B	296	98.262	56.010	48.525	1.00 21.53	C
	ATOM	4910	N	ASN	B	297	96.818	60.592	48.797	1.00 24.34	N
	ATOM	4911	CA	ASN	B	297	96.844	61.963	49.359	1.00 27.55	C
	ATOM	4912	C	ASN	B	297	95.489	62.289	49.977	1.00 26.04	C
30	ATOM	4913	O	ASN	B	297	94.632	62.886	49.330	1.00 25.16	O
	ATOM	4914	CB	ASN	B	297	97.273	62.887	48.234	1.00 29.73	C
	ATOM	4915	CG	ASN	B	297	97.614	64.306	48.636	1.00 39.58	C
	ATOM	4916	OD1	ASN	B	297	97.568	64.672	49.805	1.00 35.86	O
	ATOM	4917	ND2	ASN	B	297	97.949	65.109	47.628	1.00 41.91	N
35	ATOM	4918	N	THR	B	298	95.267	61.850	51.220	1.00 24.28	N
	ATOM	4919	CA	THR	B	298	94.005	61.925	51.918	1.00 24.81	C
	ATOM	4920	C	THR	B	298	93.823	62.981	52.978	1.00 19.80	C
	ATOM	4921	O	THR	B	298	92.743	63.235	53.507	1.00 22.95	O
	ATOM	4922	CB	THR	B	298	93.701	60.556	52.594	1.00 23.11	C
40	ATOM	4923	OG1	THR	B	298	94.702	60.282	53.589	1.00 23.00	O
	ATOM	4924	CG2	THR	B	298	93.698	59.411	51.578	1.00 19.46	C
	ATOM	4925	N	ASN	B	299	94.955	63.577	53.443	1.00 24.08	N
	ATOM	4926	CA	ASN	B	299	94.877	64.613	54.472	1.00 27.10	C
	ATOM	4927	C	ASN	B	299	94.219	64.126	55.754	1.00 25.38	C
45	ATOM	4928	O	ASN	B	299	93.474	64.767	56.495	1.00 28.22	O
	ATOM	4929	CB	ASN	B	299	94.178	65.816	53.842	1.00 34.95	C
	ATOM	4930	CG	ASN	B	299	94.840	66.388	52.606	1.00 50.61	C
	ATOM	4931	OD1	ASN	B	299	94.167	66.712	51.622	1.00 51.90	O
	ATOM	4932	ND2	ASN	B	299	96.164	66.522	52.624	1.00 52.62	N
50	ATOM	4933	N	ASN	B	300	94.496	62.853	56.080	1.00 29.32	N
	ATOM	4934	CA	ASN	B	300	93.978	62.180	57.274	1.00 29.91	C
	ATOM	4935	C	ASN	B	300	94.899	60.976	57.453	1.00 26.89	C
	ATOM	4936	O	ASN	B	300	94.995	60.090	56.612	1.00 24.38	O
	ATOM	4937	CB	ASN	B	300	92.526	61.740	57.117	1.00 26.98	C
55	ATOM	4938	CG	ASN	B	300	91.862	61.285	58.389	1.00 22.71	C
	ATOM	4939	OD1	ASN	B	300	92.503	60.721	59.312	1.00 23.84	O
	ATOM	4940	ND2	ASN	B	300	90.568	61.539	58.546	1.00 24.04	N
	ATOM	4941	N	PRO	B	301	95.630	60.969	58.564	1.00 28.29	N
	ATOM	4942	CA	PRO	B	301	96.603	59.944	58.877	1.00 28.45	C

	ATOM	4943	C	PRO	B	301	95.950	58.579	59.090	1.00	26.03		C
	ATOM	4944	O	PRO	B	301	96.644	57.584	58.891	1.00	27.20		O
	ATOM	4945	CB	PRO	B	301	97.325	60.385	60.172	1.00	31.40		C
	ATOM	4946	CG	PRO	B	301	96.271	61.258	60.787	1.00	29.13		C
5	ATOM	4947	CD	PRO	B	301	95.522	61.951	59.647	1.00	27.45		C
	ATOM	4948	N	ASN	B	302	94.670	58.582	59.456	1.00	24.31		N
	ATOM	4949	CA	ASN	B	302	94.010	57.270	59.623	1.00	17.94		C
	ATOM	4950	C	ASN	B	302	93.250	56.833	58.383	1.00	23.46		C
	ATOM	4951	O	ASN	B	302	92.516	55.829	58.492	1.00	21.92		O
10	ATOM	4952	CB	ASN	B	302	93.052	57.339	60.800	1.00	23.72		C
	ATOM	4953	CG	ASN	B	302	93.859	57.544	62.081	1.00	32.32		C
	ATOM	4954	OD1	ASN	B	302	93.402	58.344	62.876	1.00	28.78		O
	ATOM	4955	ND2	ASN	B	302	94.995	56.875	62.208	1.00	28.32		N
	ATOM	4956	N	VAL	B	303	93.428	57.528	57.282	1.00	18.31		N
15	ATOM	4957	CA	VAL	B	303	92.845	57.140	55.988	1.00	19.53		C
	ATOM	4958	C	VAL	B	303	93.990	56.793	55.056	1.00	22.04		C
	ATOM	4959	O	VAL	B	303	94.810	57.576	54.515	1.00	20.79		O
	ATOM	4960	CB	VAL	B	303	91.877	58.194	55.407	1.00	15.05		C
	ATOM	4961	CG1	VAL	B	303	91.381	57.717	54.039	1.00	16.25		C
20	ATOM	4962	CG2	VAL	B	303	90.718	58.492	56.338	1.00	20.06		C
	ATOM	4963	N	ASP	B	304	94.201	55.479	54.860	1.00	20.31		N
	ATOM	4964	CA	ASP	B	304	95.268	54.971	54.029	1.00	17.92		C
	ATOM	4965	C	ASP	B	304	95.111	55.406	52.568	1.00	20.89		C
	ATOM	4966	O	ASP	B	304	96.065	55.783	51.886	1.00	22.23		O
25	ATOM	4967	CB	ASP	B	304	95.362	53.453	54.046	1.00	20.18		C
	ATOM	4968	CG	ASP	B	304	96.019	52.851	55.258	1.00	21.75		C
	ATOM	4969	OD1	ASP	B	304	96.823	53.498	55.975	1.00	20.68		O
	ATOM	4970	OD2	ASP	B	304	95.724	51.650	55.489	1.00	20.32		O
	ATOM	4971	N	ALA	B	305	93.860	55.351	52.098	1.00	19.29		N
30	ATOM	4972	CA	ALA	B	305	93.601	55.759	50.747	1.00	18.86		C
	ATOM	4973	C	ALA	B	305	92.112	55.997	50.462	1.00	20.52		C
	ATOM	4974	O	ALA	B	305	91.253	55.458	51.134	1.00	16.38		O
	ATOM	4975	CB	ALA	B	305	94.093	54.699	49.773	1.00	24.87		C
	ATOM	4976	N	ILE	B	306	91.901	56.849	49.470	1.00	21.75		N
35	ATOM	4977	CA	ILE	B	306	90.554	57.011	48.884	1.00	16.22		C
	ATOM	4978	C	ILE	B	306	90.603	56.061	47.700	1.00	16.41		C
	ATOM	4979	O	ILE	B	306	91.590	55.973	46.952	1.00	17.02		O
	ATOM	4980	CB	ILE	B	306	90.323	58.462	48.419	1.00	17.23		C
	ATOM	4981	CG1	ILE	B	306	89.975	59.367	49.594	1.00	22.93		C
40	ATOM	4982	CG2	ILE	B	306	89.188	58.496	47.400	1.00	17.43		C
	ATOM	4983	CD1	ILE	B	306	90.105	60.852	49.248	1.00	21.04		C
	ATOM	4984	N	VAL	B	307	89.572	55.192	47.559	1.00	14.89		N
	ATOM	4985	CA	VAL	B	307	89.531	54.185	46.538	1.00	17.89		C
	ATOM	4986	C	VAL	B	307	88.172	54.196	45.825	1.00	13.24		C
45	ATOM	4987	O	VAL	B	307	87.311	54.920	46.282	1.00	13.69		O
	ATOM	4988	CB	VAL	B	307	89.684	52.752	47.152	1.00	11.95		C
	ATOM	4989	CG1	VAL	B	307	91.149	52.568	47.634	1.00	16.72		C
	ATOM	4990	CG2	VAL	B	307	88.759	52.486	48.299	1.00	15.70		C
	ATOM	4991	N	TRP	B	308	88.021	53.379	44.795	1.00	14.95		N
50	ATOM	4992	CA	TRP	B	308	86.686	53.165	44.207	1.00	11.27		C
	ATOM	4993	C	TRP	B	308	86.400	51.692	44.521	1.00	14.29		C
	ATOM	4994	O	TRP	B	308	87.217	50.868	44.096	1.00	14.70		O
	ATOM	4995	CB	TRP	B	308	86.540	53.367	42.708	1.00	12.68		C
	ATOM	4996	CG	TRP	B	308	86.445	54.809	42.281	1.00	14.81		C
55	ATOM	4997	CD1	TRP	B	308	86.775	55.892	43.036	1.00	15.98		C
	ATOM	4998	CD2	TRP	B	308	85.992	55.283	41.021	1.00	13.63		C
	ATOM	4999	NE1	TRP	B	308	86.511	57.060	42.315	1.00	14.41		N
	ATOM	5000	CE2	TRP	B	308	86.039	56.696	41.094	1.00	12.63		C
	ATOM	5001	CE3	TRP	B	308	85.553	54.666	39.850	1.00	11.90		C

	ATOM	5002	CZ2	TRP	B	308	85.667	57.480	39.984	1.00	12.59	C
	ATOM	5003	CZ3	TRP	B	308	85.141	55.441	38.773	1.00	14.38	C
	ATOM	5004	CH2	TRP	B	308	85.265	56.827	38.868	1.00	15.58	C
	ATOM	5005	N	VAL	B	309	85.299	51.443	45.230	1.00	13.29	N
5	ATOM	5006	CA	VAL	B	309	84.972	50.037	45.507	1.00	14.73	C
	ATOM	5007	C	VAL	B	309	83.750	49.608	44.706	1.00	13.65	C
	ATOM	5008	O	VAL	B	309	83.879	48.722	43.867	1.00	13.80	O
	ATOM	5009	CB	VAL	B	309	84.734	49.821	46.980	1.00	12.40	C
	ATOM	5010	CG1	VAL	B	309	84.566	48.313	47.282	1.00	13.46	C
10	ATOM	5011	CG2	VAL	B	309	85.948	50.337	47.749	1.00	10.65	C
	ATOM	5012	N	LYS	B	310	82.619	50.234	44.912	1.00	12.78	N
	ATOM	5013	CA	LYS	B	310	81.449	49.907	44.078	1.00	11.36	C
	ATOM	5014	C	LYS	B	310	81.740	50.360	42.667	1.00	13.36	C
	ATOM	5015	O	LYS	B	310	82.224	51.488	42.520	1.00	14.33	O
15	ATOM	5016	CB	LYS	B	310	80.261	50.704	44.648	1.00	14.63	C
	ATOM	5017	CG	LYS	B	310	79.036	50.837	43.769	1.00	10.97	C
	ATOM	5018	CD	LYS	B	310	78.204	49.575	43.718	1.00	12.43	C
	ATOM	5019	CE	LYS	B	310	77.103	49.754	42.675	1.00	11.20	C
	ATOM	5020	NZ	LYS	B	310	76.158	48.578	42.821	1.00	12.70	N
20	ATOM	5021	N	PRO	B	311	81.409	49.601	41.642	1.00	12.47	N
	ATOM	5022	CA	PRO	B	311	81.669	49.978	40.249	1.00	14.66	C
	ATOM	5023	C	PRO	B	311	80.498	50.829	39.775	1.00	14.22	C
	ATOM	5024	O	PRO	B	311	79.444	50.257	39.427	1.00	15.04	O
	ATOM	5025	CB	PRO	B	311	81.788	48.682	39.433	1.00	15.63	C
25	ATOM	5026	CG	PRO	B	311	82.043	47.691	40.573	1.00	14.70	C
	ATOM	5027	CD	PRO	B	311	81.088	48.165	41.700	1.00	12.82	C
	ATOM	5028	N	GLY	B	312	80.608	52.139	39.907	1.00	13.21	N
	ATOM	5029	CA	GLY	B	312	79.469	53.012	39.589	1.00	11.15	C
	ATOM	5030	C	GLY	B	312	78.962	52.784	38.170	1.00	12.40	C
30	ATOM	5031	O	GLY	B	312	79.705	52.893	37.222	1.00	14.28	O
	ATOM	5032	N	GLY	B	313	77.656	52.548	38.046	1.00	12.20	N
	ATOM	5033	CA	GLY	B	313	77.094	52.123	36.763	1.00	11.67	C
	ATOM	5034	C	GLY	B	313	76.479	50.737	36.964	1.00	10.84	C
	ATOM	5035	O	GLY	B	313	75.506	50.481	36.273	1.00	15.55	O
35	ATOM	5036	N	GLU	B	314	76.998	49.902	37.884	1.00	14.09	N
	ATOM	5037	CA	GLU	B	314	76.294	48.640	38.241	1.00	11.26	C
	ATOM	5038	C	GLU	B	314	75.156	48.979	39.210	1.00	15.02	C
	ATOM	5039	O	GLU	B	314	75.322	49.622	40.235	1.00	14.85	O
	ATOM	5040	CB	GLU	B	314	77.227	47.638	38.916	1.00	12.56	C
40	ATOM	5041	CG	GLU	B	314	78.345	47.197	37.989	1.00	13.65	C
	ATOM	5042	CD	GLU	B	314	79.269	46.157	38.596	1.00	20.26	C
	ATOM	5043	OE1	GLU	B	314	79.220	45.790	39.779	1.00	18.56	O
	ATOM	5044	OE2	GLU	B	314	80.126	45.667	37.826	1.00	19.69	O
	ATOM	5045	N	SER	B	315	73.944	48.583	38.816	1.00	14.99	N
45	ATOM	5046	CA	SER	B	315	72.771	48.879	39.634	1.00	14.73	C
	ATOM	5047	C	SER	B	315	72.870	48.300	41.037	1.00	13.26	C
	ATOM	5048	O	SER	B	315	73.336	47.195	41.262	1.00	15.35	O
	ATOM	5049	CB	SER	B	315	71.539	48.241	38.950	1.00	15.36	C
	ATOM	5050	OG	SER	B	315	70.384	48.695	39.680	1.00	14.07	O
50	ATOM	5051	N	ASP	B	316	72.193	49.015	41.949	1.00	13.79	N
	ATOM	5052	CA	ASP	B	316	72.043	48.515	43.320	1.00	11.24	C
	ATOM	5053	C	ASP	B	316	70.763	47.686	43.457	1.00	15.64	C
	ATOM	5054	O	ASP	B	316	70.565	47.094	44.534	1.00	16.84	O
	ATOM	5055	CB	ASP	B	316	71.918	49.667	44.335	1.00	11.91	C
55	ATOM	5056	CG	ASP	B	316	73.175	50.524	44.351	1.00	17.95	C
	ATOM	5057	OD1	ASP	B	316	74.263	49.936	44.427	1.00	15.26	O
	ATOM	5058	OD2	ASP	B	316	73.013	51.757	44.339	1.00	13.75	O
	ATOM	5059	N	GLY	B	317	69.974	47.626	42.383	1.00	14.29	N
	ATOM	5060	CA	GLY	B	317	68.667	46.962	42.484	1.00	17.43	C

	ATOM	5061	C	GLY	B	317	67.632	47.787	41.733	1.00 15.37	C
	ATOM	5062	O	GLY	B	317	67.876	48.859	41.215	1.00 16.97	O
	ATOM	5063	N	GLN	B	318	66.437	47.195	41.540	1.00 17.59	N
	ATOM	5064	CA	GLN	B	318	65.406	47.926	40.758	1.00 15.47	C
5	ATOM	5065	C	GLN	B	318	64.751	48.890	41.740	1.00 22.68	C
	ATOM	5066	O	GLN	B	318	63.691	48.608	42.320	1.00 23.51	O
	ATOM	5067	CB	GLN	B	318	64.360	46.888	40.293	1.00 14.02	C
	ATOM	5068	CG	GLN	B	318	64.917	45.887	39.325	1.00 15.43	C
	ATOM	5069	CD	GLN	B	318	64.300	44.495	39.327	1.00 23.03	C
10	ATOM	5070	OE1	GLN	B	318	64.058	43.792	40.291	1.00 23.47	O
	ATOM	5071	NE2	GLN	B	318	64.130	43.985	38.123	1.00 18.29	N
	ATOM	5072	N	CYS	B	319	65.378	50.029	41.963	1.00 21.27	N
	ATOM	5073	CA	CYS	B	319	64.938	51.000	42.955	1.00 19.17	C
	ATOM	5074	C	CYS	B	319	65.762	52.263	42.667	1.00 21.68	C
15	ATOM	5075	O	CYS	B	319	66.610	52.187	41.753	1.00 17.30	O
	ATOM	5076	CB	CYS	B	319	65.119	50.517	44.387	1.00 14.69	C
	ATOM	5077	SG	CYS	B	319	66.550	49.505	44.821	1.00 14.68	S
	ATOM	5078	N	GLY	B	320	65.449	53.332	43.373	1.00 20.58	N
	ATOM	5079	CA	GLY	B	320	66.123	54.596	43.086	1.00 14.87	C
20	ATOM	5080	C	GLY	B	320	65.812	55.025	41.651	1.00 22.75	C
	ATOM	5081	O	GLY	B	320	64.696	54.914	41.173	1.00 20.22	O
	ATOM	5082	N	MET	B	321	66.820	55.475	40.924	1.00 24.95	N
	ATOM	5083	CA	MET	B	321	66.659	55.983	39.581	1.00 24.67	C
	ATOM	5084	C	MET	B	321	65.847	55.079	38.673	1.00 26.28	C
25	ATOM	5085	O	MET	B	321	66.088	53.883	38.560	1.00 22.52	O
	ATOM	5086	CB	MET	B	321	68.053	56.249	38.981	1.00 24.83	C
	ATOM	5087	CG	MET	B	321	67.907	56.968	37.630	1.00 19.87	C
	ATOM	5088	SD	MET	B	321	69.561	57.484	37.139	1.00 20.71	S
	ATOM	5089	CE	MET	B	321	69.517	57.154	35.383	1.00 19.55	C
30	ATOM	5090	N	GLY	B	322	64.850	55.664	38.014	1.00 22.65	N
	ATOM	5091	CA	GLY	B	322	63.975	54.949	37.116	1.00 27.77	C
	ATOM	5092	C	GLY	B	322	64.732	54.273	35.974	1.00 20.77	C
	ATOM	5093	O	GLY	B	322	65.711	54.760	35.455	1.00 24.66	O
	ATOM	5094	N	GLY	B	323	64.224	53.080	35.645	1.00 24.85	N
35	ATOM	5095	CA	GLY	B	323	64.777	52.208	34.640	1.00 24.99	C
	ATOM	5096	C	GLY	B	323	65.819	51.273	35.238	1.00 24.75	C
	ATOM	5097	O	GLY	B	323	66.540	50.623	34.483	1.00 23.18	O
	ATOM	5098	N	ALA	B	324	65.983	51.299	36.563	1.00 21.11	N
	ATOM	5099	CA	ALA	B	324	67.046	50.519	37.173	1.00 21.32	C
40	ATOM	5100	C	ALA	B	324	66.774	49.023	37.079	1.00 21.16	C
	ATOM	5101	O	ALA	B	324	65.717	48.521	37.460	1.00 20.17	O
	ATOM	5102	CB	ALA	B	324	67.205	50.888	38.648	1.00 18.27	C
	ATOM	5103	N	PRO	B	325	67.795	48.303	36.676	1.00 17.93	N
	ATOM	5104	CA	PRO	B	325	67.767	46.867	36.532	1.00 17.77	C
45	ATOM	5105	C	PRO	B	325	68.166	46.232	37.865	1.00 18.95	C
	ATOM	5106	O	PRO	B	325	68.424	46.937	38.844	1.00 18.68	O
	ATOM	5107	CB	PRO	B	325	68.785	46.541	35.423	1.00 18.76	C
	ATOM	5108	CG	PRO	B	325	69.832	47.590	35.757	1.00 20.96	C
	ATOM	5109	CD	PRO	B	325	69.067	48.848	36.132	1.00 17.27	C
50	ATOM	5110	N	ALA	B	326	68.113	44.923	37.906	1.00 15.89	N
	ATOM	5111	CA	ALA	B	326	68.385	44.174	39.129	1.00 20.27	C
	ATOM	5112	C	ALA	B	326	69.802	44.411	39.595	1.00 21.35	C
	ATOM	5113	O	ALA	B	326	70.709	44.866	38.872	1.00 19.75	O
	ATOM	5114	CB	ALA	B	326	68.000	42.721	38.869	1.00 22.21	C
55	ATOM	5115	N	ALA	B	327	70.080	44.150	40.863	1.00 15.97	N
	ATOM	5116	CA	ALA	B	327	71.392	44.371	41.448	1.00 15.02	C
	ATOM	5117	C	ALA	B	327	72.533	43.748	40.640	1.00 20.42	C
	ATOM	5118	O	ALA	B	327	72.504	42.591	40.232	1.00 21.94	O
	ATOM	5119	CB	ALA	B	327	71.452	43.803	42.869	1.00 18.25	C

	ATOM	5120	N	GLY	B	328	73.556	44.570	40.432	1.00 17.85	N
	ATOM	5121	CA	GLY	B	328	74.734	44.200	39.671	1.00 15.80	C
	ATOM	5122	C	GLY	B	328	74.522	44.308	38.146	1.00 13.02	C
	ATOM	5123	O	GLY	B	328	75.563	44.150	37.488	1.00 17.91	O
5	ATOM	5124	N	MET	B	329	73.339	44.536	37.648	1.00 14.05	N
	ATOM	5125	CA	MET	B	329	73.187	44.626	36.178	1.00 16.72	C
	ATOM	5126	C	MET	B	329	73.655	46.016	35.783	1.00 16.72	C
	ATOM	5127	O	MET	B	329	73.507	46.968	36.558	1.00 18.00	O
	ATOM	5128	CB	MET	B	329	71.703	44.478	35.815	1.00 17.62	C
10	ATOM	5129	CG	MET	B	329	71.148	43.088	36.101	1.00 21.62	C
	ATOM	5130	SD	MET	B	329	71.711	41.853	34.921	1.00 21.71	S
	ATOM	5131	CE	MET	B	329	70.731	42.298	33.467	1.00 18.50	C
	ATOM	5132	N	TRP	B	330	74.158	46.132	34.566	1.00 14.64	N
	ATOM	5133	CA	TRP	B	330	74.611	47.412	34.062	1.00 16.09	C
15	ATOM	5134	C	TRP	B	330	73.444	48.353	33.806	1.00 14.70	C
	ATOM	5135	O	TRP	B	330	72.396	48.025	33.253	1.00 17.39	O
	ATOM	5136	CB	TRP	B	330	75.413	47.152	32.769	1.00 16.88	C
	ATOM	5137	CG	TRP	B	330	76.152	48.413	32.382	1.00 15.32	C
	ATOM	5138	CD1	TRP	B	330	75.913	49.194	31.287	1.00 16.38	C
20	ATOM	5139	CD2	TRP	B	330	77.213	49.007	33.105	1.00 14.28	C
	ATOM	5140	NE1	TRP	B	330	76.780	50.270	31.291	1.00 13.72	N
	ATOM	5141	CE2	TRP	B	330	77.605	50.169	32.389	1.00 14.27	C
	ATOM	5142	CE3	TRP	B	330	77.889	48.672	34.282	1.00 15.92	C
	ATOM	5143	CZ2	TRP	B	330	78.637	50.995	32.842	1.00 15.79	C
25	ATOM	5144	CZ3	TRP	B	330	78.921	49.494	34.714	1.00 20.19	C
	ATOM	5145	CH2	TRP	B	330	79.280	50.647	33.992	1.00 16.72	C
	ATOM	5146	N	PHE	B	331	73.603	49.579	34.262	1.00 14.26	N
	ATOM	5147	CA	PHE	B	331	72.631	50.645	34.198	1.00 12.56	C
	ATOM	5148	C	PHE	B	331	73.277	51.818	33.482	1.00 16.00	C
30	ATOM	5149	O	PHE	B	331	73.748	52.750	34.100	1.00 16.17	O
	ATOM	5150	CB	PHE	B	331	72.171	50.926	35.632	1.00 14.49	C
	ATOM	5151	CG	PHE	B	331	71.002	51.856	35.770	1.00 13.84	C
	ATOM	5152	CD1	PHE	B	331	70.246	52.354	34.721	1.00 14.56	C
	ATOM	5153	CD2	PHE	B	331	70.653	52.210	37.068	1.00 12.45	C
35	ATOM	5154	CE1	PHE	B	331	69.204	53.213	34.937	1.00 17.22	C
	ATOM	5155	CE2	PHE	B	331	69.579	53.083	37.268	1.00 16.15	C
	ATOM	5156	CZ	PHE	B	331	68.844	53.568	36.226	1.00 14.96	C
	ATOM	5157	N	ASP	B	332	73.307	51.684	32.136	1.00 15.82	N
	ATOM	5158	CA	ASP	B	332	74.068	52.692	31.372	1.00 14.89	C
40	ATOM	5159	C	ASP	B	332	73.656	54.120	31.616	1.00 16.28	C
	ATOM	5160	O	ASP	B	332	74.516	55.013	31.778	1.00 15.63	O
	ATOM	5161	CB	ASP	B	332	74.023	52.384	29.845	1.00 12.37	C
	ATOM	5162	CG	ASP	B	332	75.290	52.999	29.236	1.00 15.09	C
	ATOM	5163	OD1	ASP	B	332	76.376	52.553	29.641	1.00 16.23	O
45	ATOM	5164	OD2	ASP	B	332	75.029	53.878	28.395	1.00 17.26	O
	ATOM	5165	N	ALA	B	333	72.375	54.477	31.685	1.00 17.37	N
	ATOM	5166	CA	ALA	B	333	72.005	55.867	31.958	1.00 14.48	C
	ATOM	5167	C	ALA	B	333	72.529	56.367	33.293	1.00 13.03	C
	ATOM	5168	O	ALA	B	333	72.765	57.580	33.459	1.00 16.00	O
50	ATOM	5169	CB	ALA	B	333	70.478	55.995	31.914	1.00 18.93	C
	ATOM	5170	N	TYR	B	334	72.653	55.489	34.287	1.00 14.79	N
	ATOM	5171	CA	TYR	B	334	73.238	55.916	35.567	1.00 15.54	C
	ATOM	5172	C	TYR	B	334	74.744	56.190	35.447	1.00 14.76	C
	ATOM	5173	O	TYR	B	334	75.270	57.152	35.997	1.00 14.60	O
55	ATOM	5174	CB	TYR	B	334	72.924	54.852	36.607	1.00 14.79	C
	ATOM	5175	CG	TYR	B	334	73.200	55.311	38.009	1.00 14.39	C
	ATOM	5176	CD1	TYR	B	334	74.472	55.268	38.535	1.00 13.24	C
	ATOM	5177	CD2	TYR	B	334	72.190	55.795	38.826	1.00 19.92	C
	ATOM	5178	CE1	TYR	B	334	74.758	55.708	39.833	1.00 10.89	C

	ATOM	5179	CE2	TYR	B	334	72.423	56.215	40.113	1.00	14.81		C
	ATOM	5180	CZ	TYR	B	334	73.718	56.145	40.618	1.00	17.00		C
	ATOM	5181	OH	TYR	B	334	73.941	56.617	41.885	1.00	15.30		O
	ATOM	5182	N	ALA	B	335	75.440	55.376	34.648	1.00	14.75		N
5	ATOM	5183	CA	ALA	B	335	76.858	55.517	34.354	1.00	14.21		C
	ATOM	5184	C	ALA	B	335	77.037	56.846	33.582	1.00	15.83		C
	ATOM	5185	O	ALA	B	335	77.933	57.607	33.921	1.00	16.22		O
	ATOM	5186	CB	ALA	B	335	77.427	54.363	33.559	1.00	17.01		C
	ATOM	5187	N	GLN	B	336	76.050	57.169	32.733	1.00	13.70		N
10	ATOM	5188	CA	GLN	B	336	76.150	58.467	32.034	1.00	17.57		C
	ATOM	5189	C	GLN	B	336	76.036	59.643	32.987	1.00	15.83		C
	ATOM	5190	O	GLN	B	336	76.803	60.644	32.981	1.00	14.80		O
	ATOM	5191	CB	GLN	B	336	75.149	58.505	30.890	1.00	16.21		C
	ATOM	5192	CG	GLN	B	336	75.471	57.638	29.680	1.00	19.45		C
15	ATOM	5193	CD	GLN	B	336	74.324	57.610	28.662	1.00	19.15		C
	ATOM	5194	OE1	GLN	B	336	73.880	58.705	28.298	1.00	21.21		O
	ATOM	5195	NE2	GLN	B	336	73.927	56.404	28.315	1.00	17.62		N
	ATOM	5196	N	MET	B	337	75.076	59.580	33.925	1.00	15.24		N
	ATOM	5197	CA	MET	B	337	74.903	60.627	34.933	1.00	15.88		C
20	ATOM	5198	C	MET	B	337	76.142	60.819	35.785	1.00	15.62		C
	ATOM	5199	O	MET	B	337	76.679	61.905	36.045	1.00	15.22		O
	ATOM	5200	CB	MET	B	337	73.688	60.289	35.834	1.00	15.13		C
	ATOM	5201	CG	MET	B	337	73.743	61.191	37.099	1.00	15.31		C
	ATOM	5202	SD	MET	B	337	72.582	60.588	38.364	1.00	15.31		S
25	ATOM	5203	CE	MET	B	337	73.524	59.199	39.035	1.00	20.45		C
	ATOM	5204	N	LEU	B	338	76.770	59.694	36.202	1.00	13.63		N
	ATOM	5205	CA	LEU	B	338	77.969	59.774	37.028	1.00	12.19		C
	ATOM	5206	C	LEU	B	338	79.113	60.449	36.260	1.00	15.16		C
	ATOM	5207	O	LEU	B	338	79.891	61.162	36.874	1.00	17.16		O
30	ATOM	5208	CB	LEU	B	338	78.503	58.357	37.382	1.00	14.20		C
	ATOM	5209	CG	LEU	B	338	77.608	57.594	38.380	1.00	12.41		C
	ATOM	5210	CD1	LEU	B	338	78.170	56.196	38.662	1.00	12.02		C
	ATOM	5211	CD2	LEU	B	338	77.571	58.216	39.753	1.00	13.59		C
	ATOM	5212	N	THR	B	339	79.172	60.253	34.960	1.00	13.77		N
35	ATOM	5213	CA	THR	B	339	80.194	60.822	34.103	1.00	13.86		C
	ATOM	5214	C	THR	B	339	79.947	62.333	33.957	1.00	16.24		C
	ATOM	5215	O	THR	B	339	80.838	63.158	34.147	1.00	17.72		O
	ATOM	5216	CB	THR	B	339	80.156	60.183	32.705	1.00	15.98		C
	ATOM	5217	OG1	THR	B	339	80.425	58.760	32.823	1.00	15.82		O
40	ATOM	5218	CG2	THR	B	339	81.296	60.734	31.820	1.00	15.86		C
	ATOM	5219	N	GLN	B	340	78.694	62.706	33.675	1.00	15.53		N
	ATOM	5220	CA	GLN	B	340	78.327	64.124	33.556	1.00	17.42		C
	ATOM	5221	C	GLN	B	340	78.686	64.878	34.817	1.00	20.77		C
	ATOM	5222	O	GLN	B	340	79.222	65.994	34.793	1.00	21.75		O
45	ATOM	5223	CB	GLN	B	340	76.808	64.216	33.278	1.00	19.47		C
	ATOM	5224	CG	GLN	B	340	76.514	63.658	31.893	1.00	28.91		C
	ATOM	5225	CD	GLN	B	340	75.119	63.924	31.363	1.00	41.77		C
	ATOM	5226	OE1	GLN	B	340	74.986	64.138	30.149	1.00	31.47		O
	ATOM	5227	NE2	GLN	B	340	74.118	63.889	32.234	1.00	37.28		N
50	ATOM	5228	N	ASN	B	341	78.441	64.309	36.005	1.00	18.07		N
	ATOM	5229	CA	ASN	B	341	78.740	64.989	37.256	1.00	19.06		C
	ATOM	5230	C	ASN	B	341	80.075	64.597	37.881	1.00	15.53		C
	ATOM	5231	O	ASN	B	341	80.233	64.710	39.115	1.00	19.04		O
	ATOM	5232	CB	ASN	B	341	77.641	64.656	38.283	1.00	25.21		C
55	ATOM	5233	CG	ASN	B	341	76.273	65.115	37.815	1.00	30.07		C
	ATOM	5234	OD1	ASN	B	341	76.166	66.220	37.289	1.00	29.59		O
	ATOM	5235	ND2	ASN	B	341	75.284	64.263	38.024	1.00	27.05		N
	ATOM	5236	N	ALA	B	342	80.998	64.063	37.109	1.00	16.08		N
	ATOM	5237	CA	ALA	B	342	82.250	63.523	37.561	1.00	14.20		C

	ATOM	5238	C	ALA	B	342	83.199	64.529	38.175	1.00	16.06		C
	ATOM	5239	O	ALA	B	342	83.217	65.686	37.753	1.00	18.87		O
	ATOM	5240	CB	ALA	B	342	83.019	62.766	36.475	1.00	16.71		C
	ATOM	5241	N	HIS	B	343	83.931	64.067	39.175	1.00	17.34		N
5	ATOM	5242	CA	HIS	B	343	85.008	64.836	39.809	1.00	18.17		C
	ATOM	5243	C	HIS	B	343	85.915	65.431	38.730	1.00	18.50		C
	ATOM	5244	O	HIS	B	343	86.200	64.789	37.710	1.00	17.20		O
	ATOM	5245	CB	HIS	B	343	85.784	63.852	40.691	1.00	19.94		C
	ATOM	5246	CG	HIS	B	343	86.774	64.465	41.621	1.00	22.89		C
10	ATOM	5247	ND1	HIS	B	343	88.000	64.909	41.162	1.00	23.62		N
	ATOM	5248	CD2	HIS	B	343	86.703	64.773	42.934	1.00	19.84		C
	ATOM	5249	CE1	HIS	B	343	88.658	65.422	42.190	1.00	27.92		C
	ATOM	5250	NE2	HIS	B	343	87.906	65.362	43.275	1.00	27.70		N
	ATOM	5251	N	ASP	B	344	86.403	66.641	38.974	1.00	25.16		N
15	ATOM	5252	CA	ASP	B	344	87.307	67.338	38.068	1.00	21.59		C
	ATOM	5253	C	ASP	B	344	88.558	66.591	37.673	1.00	26.29		C
	ATOM	5254	O	ASP	B	344	89.141	66.903	36.628	1.00	22.86		O
	ATOM	5255	CB	ASP	B	344	87.746	68.637	38.790	1.00	28.98		C
	ATOM	5256	CG	ASP	B	344	86.684	69.662	39.075	1.00	41.99		C
20	ATOM	5257	OD1	ASP	B	344	85.782	69.858	38.231	1.00	41.42		O
	ATOM	5258	OD2	ASP	B	344	86.722	70.322	40.145	1.00	50.37		O
	ATOM	5259	N	GLU	B	345	89.059	65.567	38.364	1.00	18.73		N
	ATOM	5260	CA	GLU	B	345	90.241	64.832	37.985	1.00	18.17		C
	ATOM	5261	C	GLU	B	345	90.008	64.038	36.691	1.00	21.30		C
25	ATOM	5262	O	GLU	B	345	90.930	63.660	35.964	1.00	21.94		O
	ATOM	5263	CB	GLU	B	345	90.628	63.874	39.110	1.00	20.24		C
	ATOM	5264	CG	GLU	B	345	91.837	63.010	38.757	1.00	25.76		C
	ATOM	5265	CD	GLU	B	345	92.587	62.562	40.004	1.00	36.30		C
	ATOM	5266	OE1	GLU	B	345	92.592	63.298	41.018	1.00	33.65		O
30	ATOM	5267	OE2	GLU	B	345	93.185	61.458	39.968	1.00	34.93		O
	ATOM	5268	N	ILE	B	346	88.745	63.635	36.496	1.00	17.40		N
	ATOM	5269	CA	ILE	B	346	88.371	62.847	35.329	1.00	16.88		C
	ATOM	5270	C	ILE	B	346	88.219	63.690	34.074	1.00	17.04		C
	ATOM	5271	O	ILE	B	346	87.359	64.583	34.071	1.00	20.05		O
35	ATOM	5272	CB	ILE	B	346	87.041	62.130	35.697	1.00	15.39		C
	ATOM	5273	CG1	ILE	B	346	87.409	61.190	36.850	1.00	18.55		C
	ATOM	5274	CG2	ILE	B	346	86.493	61.353	34.507	1.00	18.29		C
	ATOM	5275	CD1	ILE	B	346	86.198	60.561	37.539	1.00	14.82		C
	ATOM	5276	N	ALA	B	347	88.960	63.398	33.021	1.00	18.37		N
40	ATOM	5277	CA	ALA	B	347	88.861	64.168	31.760	1.00	17.33		C
	ATOM	5278	C	ALA	B	347	89.318	63.412	30.497	1.00	20.08		C
	ATOM	5279	O	ALA	B	347	90.250	62.608	30.770	1.00	20.39		O
	ATOM	5280	CB	ALA	B	347	89.727	65.428	31.837	1.00	20.16		C
	ATOM	5281	OW0	WAT	W	1	79.112	54.022	45.738	1.00	12.17		O
45	ATOM	5282	OW0	WAT	W	2	4.055	20.110	23.781	1.00	12.73		O
	ATOM	5283	OW0	WAT	W	3	2.034	21.964	24.841	1.00	12.38		O
	ATOM	5284	OW0	WAT	W	4	81.210	50.505	53.418	1.00	12.48		O
	ATOM	5285	OW0	WAT	W	5	18.092	19.751	17.952	1.00	13.16		O
	ATOM	5286	OW0	WAT	W	6	78.129	41.012	53.890	1.00	13.41		O
50	ATOM	5287	OW0	WAT	W	7	81.306	56.076	47.142	1.00	13.32		O
	ATOM	5288	OW0	WAT	W	8	11.893	20.570	25.469	1.00	14.06		O
	ATOM	5289	OW0	WAT	W	9	-2.426	22.881	11.531	1.00	14.23		O
	ATOM	5290	OW0	WAT	W	10	-1.267	19.759	16.839	1.00	13.86		O
	ATOM	5291	OW0	WAT	W	11	18.608	19.198	21.819	1.00	13.78		O
55	ATOM	5292	OW0	WAT	W	12	88.547	50.226	37.081	1.00	14.21		O
	ATOM	5293	OW0	WAT	W	13	75.880	52.351	40.140	1.00	14.75		O
	ATOM	5294	OW0	WAT	W	14	-3.729	30.367	14.059	1.00	14.40		O
	ATOM	5295	OW0	WAT	W	15	91.589	46.538	41.796	1.00	15.04		O
	ATOM	5296	OW0	WAT	W	16	-3.671	21.503	18.469	1.00	15.32		O

	ATOM	5297	OWO	WAT	W	17	79.062	48.715	52.517	1.00	15.04		O
	ATOM	5298	OWO	WAT	W	18	2.175	17.093	25.581	1.00	15.54		O
	ATOM	5299	OWO	WAT	W	19	73.198	52.473	39.528	1.00	15.46		O
	ATOM	5300	OWO	WAT	W	20	78.461	47.746	49.834	1.00	15.58		O
5	ATOM	5301	OWO	WAT	W	21	82.073	54.693	40.194	1.00	15.32		O
	ATOM	5302	OWO	WAT	W	22	76.464	49.833	51.285	1.00	15.48		O
	ATOM	5303	OWO	WAT	W	23	0.721	17.028	11.027	1.00	15.78		O
	ATOM	5304	OWO	WAT	W	24	75.548	43.374	54.531	1.00	16.49		O
	ATOM	5305	OWO	WAT	W	25	75.361	34.637	50.038	1.00	15.38		O
10	ATOM	5306	OWO	WAT	W	26	87.493	51.275	34.699	1.00	16.09		O
	ATOM	5307	OWO	WAT	W	27	76.610	51.276	54.441	1.00	15.92		O
	ATOM	5308	OWO	WAT	W	28	78.105	47.615	29.014	1.00	16.54		O
	ATOM	5309	OWO	WAT	W	29	4.161	33.336	13.790	1.00	16.72		O
	ATOM	5310	OWO	WAT	W	30	0.715	18.929	24.143	1.00	16.01		O
15	ATOM	5311	OWO	WAT	W	31	75.699	40.905	55.224	1.00	15.75		O
	ATOM	5312	OWO	WAT	W	32	72.285	45.414	54.390	1.00	16.94		O
	ATOM	5313	OWO	WAT	W	33	8.177	22.864	29.335	1.00	16.44		O
	ATOM	5314	OWO	WAT	W	34	75.943	34.973	46.108	1.00	16.92		O
	ATOM	5315	OWO	WAT	W	35	12.402	18.231	26.887	1.00	17.33		O
20	ATOM	5316	OWO	WAT	W	36	0.823	30.118	8.990	1.00	16.04		O
	ATOM	5317	OWO	WAT	W	37	81.149	44.222	57.670	1.00	17.82		O
	ATOM	5318	OWO	WAT	W	38	89.733	54.803	42.176	1.00	16.98		O
	ATOM	5319	OWO	WAT	W	39	26.067	19.553	29.823	1.00	17.33		O
	ATOM	5320	OWO	WAT	W	40	67.030	53.636	48.885	1.00	16.30		O
25	ATOM	5321	OWO	WAT	W	41	76.393	45.904	49.422	1.00	17.54		O
	ATOM	5322	OWO	WAT	W	42	85.206	62.816	45.996	1.00	17.54		O
	ATOM	5323	OWO	WAT	W	43	76.471	47.028	47.000	1.00	17.44		O
	ATOM	5324	OWO	WAT	W	44	0.832	14.465	10.111	1.00	17.68		O
	ATOM	5325	OWO	WAT	W	45	17.126	39.270	29.347	1.00	17.51		O
30	ATOM	5326	OWO	WAT	W	46	73.780	40.503	57.255	1.00	17.25		O
	ATOM	5327	OWO	WAT	W	47	21.723	18.784	14.274	1.00	17.45		O
	ATOM	5328	OWO	WAT	W	48	77.775	46.337	41.963	1.00	17.43		O
	ATOM	5329	OWO	WAT	W	49	74.042	51.423	47.868	1.00	17.43		O
	ATOM	5330	OWO	WAT	W	50	5.173	19.793	21.019	1.00	16.93		O
35	ATOM	5331	OWO	WAT	W	51	23.296	13.219	28.911	1.00	17.88		O
	ATOM	5332	OWO	WAT	W	52	68.576	33.406	53.686	1.00	17.34		O
	ATOM	5333	OWO	WAT	W	53	79.676	60.534	56.642	1.00	17.94		O
	ATOM	5334	OWO	WAT	W	54	20.966	12.588	25.236	1.00	17.68		O
	ATOM	5335	OWO	WAT	W	55	79.455	46.852	58.012	1.00	18.46		O
40	ATOM	5336	OWO	WAT	W	56	21.961	22.672	13.906	1.00	18.30		O
	ATOM	5337	OWO	WAT	W	57	23.164	37.315	22.948	1.00	18.83		O
	ATOM	5338	OWO	WAT	W	58	27.796	21.790	29.543	1.00	19.01		O
	ATOM	5339	OWO	WAT	W	59	21.970	7.754	18.732	1.00	17.60		O
	ATOM	5340	OWO	WAT	W	60	86.215	67.889	25.424	1.00	18.90		O
45	ATOM	5341	OWO	WAT	W	61	74.166	48.563	46.894	1.00	17.91		O
	ATOM	5342	OWO	WAT	W	62	78.589	52.339	52.824	1.00	18.37		O
	ATOM	5343	OWO	WAT	W	63	82.800	44.837	37.893	1.00	18.85		O
	ATOM	5344	OWO	WAT	W	64	92.766	63.033	31.253	1.00	19.30		O
	ATOM	5345	OWO	WAT	W	65	76.648	25.143	57.923	1.00	18.49		O
50	ATOM	5346	OWO	WAT	W	66	13.779	11.916	23.075	1.00	18.38		O
	ATOM	5347	OWO	WAT	W	67	83.618	43.219	39.903	1.00	18.64		O
	ATOM	5348	OWO	WAT	W	68	10.042	17.714	26.131	1.00	18.79		O
	ATOM	5349	OWO	WAT	W	69	8.435	26.201	11.599	1.00	18.52		O
	ATOM	5350	OWO	WAT	W	70	77.564	31.577	41.883	1.00	18.71		O
55	ATOM	5351	OWO	WAT	W	71	5.877	20.685	29.317	1.00	18.50		O
	ATOM	5352	OWO	WAT	W	72	86.752	52.258	72.789	1.00	18.85		O
	ATOM	5353	OWO	WAT	W	73	20.904	8.069	26.108	1.00	18.78		O
	ATOM	5354	OWO	WAT	W	74	22.378	10.212	25.677	1.00	19.26		O
	ATOM	5355	OWO	WAT	W	75	77.680	35.889	38.422	1.00	18.55		O

	ATOM	5356	OWO	WAT	W	76	88.452	62.598	22.788	1.00 19.24	O
	ATOM	5357	OWO	WAT	W	77	21.318	39.505	23.558	1.00 19.73	O
	ATOM	5358	OWO	WAT	W	78	-14.011	32.525	2.931	1.00 18.99	O
	ATOM	5359	OWO	WAT	W	79	78.129	62.243	54.938	1.00 18.80	O
5	ATOM	5360	OWO	WAT	W	80	0.014	29.221	6.595	1.00 20.44	O
	ATOM	5361	OWO	WAT	W	81	23.996	15.750	17.833	1.00 20.07	O
	ATOM	5362	OWO	WAT	W	82	76.322	59.580	62.028	1.00 18.85	O
	ATOM	5363	OWO	WAT	W	83	72.629	47.922	53.167	1.00 19.93	O
	ATOM	5364	OWO	WAT	W	84	79.463	28.268	40.776	1.00 19.66	O
10	ATOM	5365	OWO	WAT	W	85	74.825	46.354	29.274	1.00 19.67	O
	ATOM	5366	OWO	WAT	W	86	70.232	52.683	31.008	1.00 19.14	O
	ATOM	5367	OWO	WAT	W	87	5.443	16.610	15.882	1.00 20.49	O
	ATOM	5368	OWO	WAT	W	88	74.886	27.202	58.421	1.00 20.34	O
	ATOM	5369	OWO	WAT	W	89	-10.776	24.484	17.845	1.00 20.49	O
15	ATOM	5370	OWO	WAT	W	90	20.491	12.405	31.298	1.00 19.76	O
	ATOM	5371	OWO	WAT	W	91	17.200	40.737	14.546	1.00 20.80	O
	ATOM	5372	OWO	WAT	W	92	13.133	16.256	28.864	1.00 20.36	O
	ATOM	5373	OWO	WAT	W	93	77.384	45.372	30.597	1.00 20.53	O
	ATOM	5374	OWO	WAT	W	94	1.984	14.905	18.988	1.00 20.94	O
20	ATOM	5375	OWO	WAT	W	95	-14.038	26.920	0.625	1.00 20.67	O
	ATOM	5376	OWO	WAT	W	96	-7.581	18.636	28.025	1.00 20.23	O
	ATOM	5377	OWO	WAT	W	97	67.099	43.329	35.735	1.00 20.97	O
	ATOM	5378	OWO	WAT	W	98	63.796	52.216	39.947	1.00 21.26	O
	ATOM	5379	OWO	WAT	W	99	16.979	6.692	21.514	1.00 20.30	O
25	ATOM	5380	OWO	WAT	W	100	88.035	52.621	25.577	1.00 20.12	O
	ATOM	5381	OWO	WAT	W	101	6.531	19.613	12.905	1.00 21.09	O
	ATOM	5382	OWO	WAT	W	102	74.606	41.058	59.683	1.00 20.58	O
	ATOM	5383	OWO	WAT	W	103	86.280	57.327	75.910	1.00 20.45	O
	ATOM	5384	OWO	WAT	W	104	85.786	61.915	22.821	1.00 20.13	O
30	ATOM	5385	OWO	WAT	W	105	20.695	42.402	20.167	1.00 21.81	O
	ATOM	5386	OWO	WAT	W	106	87.016	65.242	28.514	1.00 21.68	O
	ATOM	5387	OWO	WAT	W	107	5.790	14.131	24.305	1.00 20.94	O
	ATOM	5388	OWO	WAT	W	108	73.679	27.845	51.659	1.00 20.35	O
	ATOM	5389	OWO	WAT	W	109	71.431	41.848	64.176	1.00 20.97	O
35	ATOM	5390	OWO	WAT	W	110	76.779	46.335	44.417	1.00 20.12	O
	ATOM	5391	OWO	WAT	W	111	82.550	47.394	23.709	1.00 21.31	O
	ATOM	5392	OWO	WAT	W	112	-14.734	32.395	7.536	1.00 22.16	O
	ATOM	5393	OWO	WAT	W	113	24.029	10.879	27.547	1.00 21.29	O
	ATOM	5394	OWO	WAT	W	114	76.023	62.807	53.231	1.00 21.31	O
40	ATOM	5395	OWO	WAT	W	115	8.897	11.264	16.028	1.00 22.17	O
	ATOM	5396	OWO	WAT	W	116	66.003	32.311	54.132	1.00 20.55	O
	ATOM	5397	OWO	WAT	W	117	69.194	33.931	59.941	1.00 21.61	O
	ATOM	5398	OWO	WAT	W	118	83.824	28.975	40.950	1.00 21.84	O
	ATOM	5399	OWO	WAT	W	119	72.876	46.300	46.114	1.00 21.25	O
45	ATOM	5400	OWO	WAT	W	120	86.864	59.383	23.726	1.00 21.02	O
	ATOM	5401	OWO	WAT	W	121	-15.572	25.586	4.811	1.00 21.90	O
	ATOM	5402	OWO	WAT	W	122	8.301	14.073	25.474	1.00 21.23	O
	ATOM	5403	OWO	WAT	W	123	87.698	51.566	21.397	1.00 21.20	O
	ATOM	5404	OWO	WAT	W	124	-1.348	12.529	23.820	1.00 21.80	O
50	ATOM	5405	OWO	WAT	W	125	68.941	31.017	57.321	1.00 21.59	O
	ATOM	5406	OWO	WAT	W	126	80.433	41.114	34.021	1.00 22.68	O
	ATOM	5407	OWO	WAT	W	127	11.397	26.193	11.415	1.00 22.37	O
	ATOM	5408	OWO	WAT	W	128	68.643	45.302	45.632	1.00 21.64	O
	ATOM	5409	OWO	WAT	W	129	80.143	43.408	40.169	1.00 21.83	O
55	ATOM	5410	OWO	WAT	W	130	3.654	17.397	22.289	1.00 21.64	O
	ATOM	5411	OWO	WAT	W	131	27.369	33.046	23.038	1.00 23.05	O
	ATOM	5412	OWO	WAT	W	132	86.626	48.296	26.583	1.00 22.72	O
	ATOM	5413	OWO	WAT	W	133	83.480	64.481	44.955	1.00 23.16	O
	ATOM	5414	OWO	WAT	W	134	-8.973	16.987	26.256	1.00 23.30	O

	ATOM	5415	OWO WAT W 135	0.809	11.826	1.518	1.00 21.80	O
	ATOM	5416	OWO WAT W 136	92.390	58.996	64.959	1.00 23.18	O
	ATOM	5417	OWO WAT W 137	4.534	35.854	7.060	1.00 22.30	O
	ATOM	5418	OWO WAT W 138	79.163	46.278	26.907	1.00 23.33	O
5	ATOM	5419	OWO WAT W 139	0.694	7.404	19.192	1.00 22.66	O
	ATOM	5420	OWO WAT W 140	18.809	13.132	18.869	1.00 23.05	O
	ATOM	5421	OWO WAT W 141	72.220	27.994	49.426	1.00 23.25	O
	ATOM	5422	OWO WAT W 142	4.841	20.502	0.208	1.00 22.22	O
	ATOM	5423	OWO WAT W 143	71.919	49.722	30.760	1.00 22.99	O
10	ATOM	5424	OWO WAT W 144	12.098	11.046	21.210	1.00 23.01	O
	ATOM	5425	OWO WAT W 145	79.245	64.449	43.320	1.00 23.00	O
	ATOM	5426	OWO WAT W 146	93.063	61.183	67.355	1.00 22.64	O
	ATOM	5427	OWO WAT W 147	11.553	46.298	24.111	1.00 22.04	O
	ATOM	5428	OWO WAT W 148	82.911	39.487	35.756	1.00 22.87	O
15	ATOM	5429	OWO WAT W 149	74.637	48.588	49.552	1.00 22.99	O
	ATOM	5430	OWO WAT W 150	0.578	37.358	8.807	1.00 24.31	O
	ATOM	5431	OWO WAT W 151	82.019	64.007	42.624	1.00 23.21	O
	ATOM	5432	OWO WAT W 152	85.036	65.669	35.200	1.00 22.76	O
	ATOM	5433	OWO WAT W 153	3.475	14.190	1.312	1.00 24.09	O
20	ATOM	5434	OWO WAT W 154	83.528	40.660	39.595	1.00 22.95	O
	ATOM	5435	OWO WAT W 155	73.419	54.004	55.803	1.00 23.90	O
	ATOM	5436	OWO WAT W 156	20.863	38.812	26.443	1.00 22.34	O
	ATOM	5437	OWO WAT W 157	16.827	38.006	33.689	1.00 22.92	O
	ATOM	5438	OWO WAT W 158	74.104	31.412	42.612	1.00 23.56	O
25	ATOM	5439	OWO WAT W 159	12.323	8.383	20.449	1.00 23.19	O
	ATOM	5440	OWO WAT W 160	21.369	35.472	32.065	1.00 24.40	O
	ATOM	5441	OWO WAT W 161	71.705	40.995	66.703	1.00 24.45	O
	ATOM	5442	OWO WAT W 162	−5.979	37.842	28.612	1.00 24.65	O
	ATOM	5443	OWO WAT W 163	72.046	44.098	47.546	1.00 23.63	O
30	ATOM	5444	OWO WAT W 164	5.984	18.873	17.140	1.00 23.83	O
	ATOM	5445	OWO WAT W 165	70.903	29.794	46.355	1.00 23.57	O
	ATOM	5446	OWO WAT W 166	10.226	38.929	28.299	1.00 23.19	O
	ATOM	5447	OWO WAT W 167	81.774	28.127	39.317	1.00 23.01	O
	ATOM	5448	OWO WAT W 168	95.769	49.468	36.463	1.00 24.35	O
35	ATOM	5449	OWO WAT W 169	−14.213	24.342	7.233	1.00 23.09	O
	ATOM	5450	OWO WAT W 170	25.309	29.408	17.242	1.00 24.67	O
	ATOM	5451	OWO WAT W 171	7.199	37.272	29.329	1.00 23.58	O
	ATOM	5452	OWO WAT W 172	93.606	45.696	34.708	1.00 23.69	O
	ATOM	5453	OWO WAT W 173	7.433	18.620	20.711	1.00 24.48	O
40	ATOM	5454	OWO WAT W 174	74.074	46.632	51.295	1.00 22.55	O
	ATOM	5455	OWO WAT W 175	91.787	49.455	30.732	1.00 23.38	O
	ATOM	5456	OWO WAT W 176	79.639	67.570	27.300	1.00 24.62	O
	ATOM	5457	OWO WAT W 177	7.342	19.972	1.553	1.00 23.88	O
	ATOM	5458	OWO WAT W 178	22.202	7.130	28.005	1.00 24.13	O
45	ATOM	5459	OWO WAT W 179	83.838	26.307	45.281	1.00 23.96	O
	ATOM	5460	OWO WAT W 180	−6.270	12.318	2.985	1.00 24.29	O
	ATOM	5461	OWO WAT W 181	72.112	45.217	50.025	1.00 23.42	O
	ATOM	5462	OWO WAT W 182	−6.885	34.340	12.754	1.00 24.84	O
	ATOM	5463	OWO WAT W 183	14.139	6.716	21.899	1.00 24.03	O
50	ATOM	5464	OWO WAT W 184	87.813	50.090	24.798	1.00 24.38	O
	ATOM	5465	OWO WAT W 185	81.933	66.920	35.565	1.00 24.82	O
	ATOM	5466	OWO WAT W 186	25.620	17.202	21.196	1.00 24.48	O
	ATOM	5467	OWO WAT W 187	86.075	49.356	22.479	1.00 24.44	O
	ATOM	5468	OWO WAT W 188	72.702	63.321	49.994	1.00 24.35	O
55	ATOM	5469	OWO WAT W 189	81.920	57.675	17.338	1.00 24.05	O
	ATOM	5470	OWO WAT W 190	−17.260	27.155	6.346	1.00 23.60	O
	ATOM	5471	OWO WAT W 191	−1.447	26.525	44.543	1.00 25.86	O
	ATOM	5472	OWO WAT W 192	87.376	41.125	32.826	1.00 25.44	O
	ATOM	5473	OWO WAT W 193	4.539	15.379	17.997	1.00 25.59	O

	ATOM	5474	OWO	WAT	W	194	5.371	43.111	15.411	1.00 24.20	O
	ATOM	5475	OWO	WAT	W	195	25.699	18.596	23.262	1.00 25.28	O
	ATOM	5476	OWO	WAT	W	196	-8.314	37.998	17.944	1.00 24.46	O
	ATOM	5477	OWO	WAT	W	197	73.193	40.020	62.202	1.00 24.69	O
5	ATOM	5478	OWO	WAT	W	198	18.395	5.676	28.085	1.00 24.78	O
	ATOM	5479	OWO	WAT	W	199	90.064	63.465	67.583	1.00 25.09	O
	ATOM	5480	OWO	WAT	W	200	88.914	45.770	29.800	1.00 25.04	O
	ATOM	5481	OWO	WAT	W	201	63.582	49.954	38.656	1.00 24.94	O
	ATOM	5482	OWO	WAT	W	202	76.428	68.398	60.395	1.00 24.83	O
10	ATOM	5483	OWO	WAT	W	203	91.288	61.774	28.305	1.00 24.77	O
	ATOM	5484	OWO	WAT	W	204	-0.050	13.513	27.019	1.00 26.50	O
	ATOM	5485	OWO	WAT	W	205	64.652	31.023	52.052	1.00 25.92	O
	ATOM	5486	OWO	WAT	W	206	76.022	52.460	23.809	1.00 25.11	O
	ATOM	5487	OWO	WAT	W	207	78.488	54.816	19.424	1.00 23.62	O
15	ATOM	5488	OWO	WAT	W	208	81.501	43.128	29.272	1.00 25.00	O
	ATOM	5489	OWO	WAT	W	209	16.543	48.590	19.406	1.00 25.78	O
	ATOM	5490	OWO	WAT	W	210	-3.946	34.269	12.357	1.00 26.09	O
	ATOM	5491	OWO	WAT	W	211	0.274	36.004	34.072	1.00 25.48	O
	ATOM	5492	OWO	WAT	W	212	-2.700	42.880	11.941	1.00 25.30	O
20	ATOM	5493	OWO	WAT	W	213	22.253	10.326	31.624	1.00 25.92	O
	ATOM	5494	OWO	WAT	W	214	84.603	26.874	42.606	1.00 26.89	O
	ATOM	5495	OWO	WAT	W	215	64.317	34.102	55.024	1.00 25.23	O
	ATOM	5496	OWO	WAT	W	216	100.011	55.967	44.835	1.00 24.71	O
	ATOM	5497	OWO	WAT	W	217	19.449	8.432	37.301	1.00 27.30	O
25	ATOM	5498	OWO	WAT	W	218	23.712	9.203	23.629	1.00 25.71	O
	ATOM	5499	OWO	WAT	W	219	16.643	5.516	31.940	1.00 26.43	O
	ATOM	5500	OWO	WAT	W	220	26.369	14.624	18.707	1.00 26.31	O
	ATOM	5501	OWO	WAT	W	221	94.635	61.074	30.648	1.00 27.32	O
	ATOM	5502	OWO	WAT	W	222	66.778	30.489	55.915	1.00 25.29	O
30	ATOM	5503	OWO	WAT	W	223	8.164	19.413	5.946	1.00 26.20	O
	ATOM	5504	OWO	WAT	W	224	68.319	61.045	57.703	1.00 26.16	O
	ATOM	5505	OWO	WAT	W	225	77.614	67.608	62.700	1.00 27.09	O
	ATOM	5506	OWO	WAT	W	226	-13.213	23.887	21.011	1.00 25.97	O
	ATOM	5507	OWO	WAT	W	227	81.456	70.408	58.740	1.00 26.11	O
35	ATOM	5508	OWO	WAT	W	228	-7.666	13.454	38.533	1.00 25.22	O
	ATOM	5509	OWO	WAT	W	229	-12.884	34.121	8.799	1.00 26.58	O
	ATOM	5510	OWO	WAT	W	230	-6.303	15.066	32.884	1.00 26.62	O
	ATOM	5511	OWO	WAT	W	231	24.817	36.357	21.147	1.00 27.41	O
	ATOM	5512	OWO	WAT	W	232	68.975	40.819	51.555	1.00 26.80	O
40	ATOM	5513	OWO	WAT	W	233	62.632	37.812	50.828	1.00 25.32	O
	ATOM	5514	OWO	WAT	W	234	95.525	42.626	57.196	1.00 26.53	O
	ATOM	5515	OWO	WAT	W	235	8.338	47.544	8.902	1.00 27.70	O
	ATOM	5516	OWO	WAT	W	236	-12.390	22.508	16.772	1.00 25.11	O
	ATOM	5517	OWO	WAT	W	237	25.216	19.415	32.498	1.00 26.28	O
45	ATOM	5518	OWO	WAT	W	238	92.994	63.579	33.943	1.00 26.27	O
	ATOM	5519	OWO	WAT	W	239	-9.096	14.877	24.581	1.00 26.39	O
	ATOM	5520	OWO	WAT	W	240	2.134	44.607	16.924	1.00 27.42	O
	ATOM	5521	OWO	WAT	W	241	-14.304	21.455	6.854	1.00 28.45	O
	ATOM	5522	OWO	WAT	W	242	-14.778	17.616	2.235	1.00 27.58	O
50	ATOM	5523	OWO	WAT	W	243	66.731	32.731	60.491	1.00 26.64	O
	ATOM	5524	OWO	WAT	W	244	90.919	46.924	31.342	1.00 27.52	O
	ATOM	5525	OWO	WAT	W	245	92.157	28.892	53.486	1.00 25.99	O
	ATOM	5526	OWO	WAT	W	246	71.890	56.261	26.053	1.00 26.43	O
	ATOM	5527	OWO	WAT	W	247	83.746	35.879	35.372	1.00 27.14	O
55	ATOM	5528	OWO	WAT	W	248	76.418	38.214	42.342	1.00 27.43	O
	ATOM	5529	OWO	WAT	W	249	98.151	58.311	45.251	1.00 26.58	O
	ATOM	5530	OWO	WAT	W	250	27.142	35.285	21.962	1.00 27.17	O
	ATOM	5531	OWO	WAT	W	251	93.551	54.559	39.859	1.00 26.49	O
	ATOM	5532	OWO	WAT	W	252	-0.494	14.603	-2.242	1.00 26.38	O

	ATOM	5533	OWO WAT W 253	96.812	32.211	41.855	1.00 27.35		O
	ATOM	5534	OWO WAT W 254	93.676	26.381	56.065	1.00 28.27		O
	ATOM	5535	OWO WAT W 255	74.909	51.815	50.928	1.00 25.63		O
	ATOM	5536	OWO WAT W 256	10.024	30.826	4.219	1.00 26.59		O
5	ATOM	5537	OWO WAT W 257	86.014	63.966	63.991	1.00 26.60		O
	ATOM	5538	OWO WAT W 258	12.077	49.872	18.447	1.00 26.99		O
	ATOM	5539	OWO WAT W 259	75.776	62.716	50.417	1.00 27.16		O
	ATOM	5540	OWO WAT W 260	−5.473	8.028	15.628	1.00 27.01		O
	ATOM	5541	OWO WAT W 261	−11.688	21.112	13.920	1.00 27.20		O
10	ATOM	5542	OWO WAT W 262	18.227	47.258	17.624	1.00 26.22		O
	ATOM	5543	OWO WAT W 263	97.547	58.225	53.426	1.00 27.26		O
	ATOM	5544	OWO WAT W 264	72.217	32.324	66.479	1.00 26.58		O
	ATOM	5545	OWO WAT W 265	−9.131	14.922	21.769	1.00 27.41		O
	ATOM	5546	OWO WAT W 266	14.055	7.788	29.869	1.00 27.39		O
15	ATOM	5547	OWO WAT W 267	68.295	42.968	42.880	1.00 27.61		O
	ATOM	5548	OWO WAT W 268	75.117	61.475	67.275	1.00 26.68		O
	ATOM	5549	OWO WAT W 269	80.901	66.176	32.281	1.00 27.34		O
	ATOM	5550	OWO WAT W 270	15.985	44.407	25.423	1.00 28.19		O
	ATOM	5551	OWO WAT W 271	19.315	23.186	38.541	1.00 27.36		O
20	ATOM	5552	OWO WAT W 272	−3.276	13.591	−3.352	1.00 26.30		O
	ATOM	5553	OWO WAT W 273	0.048	39.687	10.019	1.00 28.77		O
	ATOM	5554	OWO WAT W 274	86.570	66.699	56.910	1.00 26.86		O
	ATOM	5555	OWO WAT W 275	101.080	43.650	42.562	1.00 26.38		O
	ATOM	5556	OWO WAT W 276	5.159	31.378	1.650	1.00 26.83		O
25	ATOM	5557	OWO WAT W 277	19.344	16.162	38.243	1.00 27.08		O
	ATOM	5558	OWO WAT W 278	7.211	17.512	0.271	1.00 27.25		O
	ATOM	5559	OWO WAT W 279	7.252	41.263	28.306	1.00 29.24		O
	ATOM	5560	OWO WAT W 280	16.308	13.629	39.671	1.00 28.60		O
	ATOM	5561	OWO WAT W 281	89.287	60.284	23.945	1.00 27.52		O
30	ATOM	5562	OWO WAT W 282	69.565	45.345	59.866	1.00 29.03		O
	ATOM	5563	OWO WAT W 283	−0.223	18.228	−5.027	1.00 28.14		O
	ATOM	5564	OWO WAT W 284	81.151	25.262	44.289	1.00 27.58		O
	ATOM	5565	OWO WAT W 285	99.169	32.284	40.234	1.00 29.52		O
	ATOM	5566	OWO WAT W 286	95.691	50.624	67.990	1.00 29.07		O
35	ATOM	5567	OWO WAT W 287	71.579	31.121	43.880	1.00 28.01		O
	ATOM	5568	OWO WAT W 288	92.823	45.377	32.332	1.00 28.45		O
	ATOM	5569	OWO WAT W 289	27.409	27.582	17.118	1.00 27.70		O
	ATOM	5570	OWO WAT W 290	74.196	30.372	66.558	1.00 28.92		O
	ATOM	5571	OWO WAT W 291	21.518	4.520	34.959	1.00 28.60		O
40	ATOM	5572	OWO WAT W 292	90.016	59.944	27.131	1.00 27.82		O
	ATOM	5573	OWO WAT W 293	85.709	39.426	33.993	1.00 29.17		O
	ATOM	5574	OWO WAT W 294	78.974	41.693	41.647	1.00 29.72		O
	ATOM	5575	OWO WAT W 295	83.350	46.101	26.137	1.00 27.64		O
	ATOM	5576	OWO WAT W 296	74.769	28.277	61.043	1.00 28.99		O
45	ATOM	5577	OWO WAT W 297	14.560	16.016	33.687	1.00 28.56		O
	ATOM	5578	OWO WAT W 298	72.818	53.561	26.834	1.00 28.93		O
	ATOM	5579	OWO WAT W 299	11.256	15.993	18.588	1.00 28.72		O
	ATOM	5580	OWO WAT W 300	67.710	34.525	49.354	1.00 28.74		O
	ATOM	5581	OWO WAT W 301	99.668	41.894	55.468	1.00 28.95		O
50	ATOM	5582	OWO WAT W 302	24.302	26.332	11.545	1.00 29.89		O
	ATOM	5583	OWO WAT W 303	7.963	16.898	22.507	1.00 27.32		O
	ATOM	5584	OWO WAT W 304	9.382	11.416	25.563	1.00 30.24		O
	ATOM	5585	OWO WAT W 305	93.889	57.441	40.347	1.00 29.27		O
	ATOM	5586	OWO WAT W 306	9.459	11.627	22.239	1.00 30.06		O
55	ATOM	5587	OWO WAT W 307	10.938	8.887	32.504	1.00 29.53		O
	ATOM	5588	OWO WAT W 308	83.445	65.662	64.483	1.00 29.12		O
	ATOM	5589	OWO WAT W 309	−7.683	41.239	19.682	1.00 30.03		O
	ATOM	5590	OWO WAT W 310	6.408	3.672	14.244	1.00 29.77		O
	ATOM	5591	OWO WAT W 311	85.759	67.898	41.376	1.00 29.47		O

	ATOM	5592	OWO WAT W 312	5.375	45.838	16.618	1.00	29.79	O
	ATOM	5593	OWO WAT W 313	90.650	65.026	55.548	1.00	29.64	O
	ATOM	5594	OWO WAT W 314	86.033	58.221	73.306	1.00	28.08	O
	ATOM	5595	OWO WAT W 315	8.292	18.446	18.000	1.00	29.00	O
5	ATOM	5596	OWO WAT W 316	−14.813	24.393	28.372	1.00	28.95	O
	ATOM	5597	OWO WAT W 317	92.520	58.107	29.071	1.00	27.22	O
	ATOM	5598	OWO WAT W 318	65.504	41.219	58.614	1.00	29.06	O
	ATOM	5599	OWO WAT W 319	84.828	56.500	71.542	1.00	29.57	O
	ATOM	5600	OWO WAT W 320	5.085	35.318	4.526	1.00	29.30	O
10	ATOM	5601	OWO WAT W 321	29.625	17.065	29.226	1.00	28.08	O
	ATOM	5602	OWO WAT W 322	92.737	59.431	38.399	1.00	29.72	O
	ATOM	5603	OWO WAT W 323	88.345	53.710	76.870	1.00	29.68	O
	ATOM	5604	OWO WAT W 324	22.819	28.744	12.621	1.00	28.61	O
	ATOM	5605	OWO WAT W 325	79.890	47.669	24.527	1.00	28.63	O
15	ATOM	5606	OWO WAT W 326	17.248	5.673	24.222	1.00	28.57	O
	ATOM	5607	OWO WAT W 327	12.877	26.041	7.755	1.00	28.49	O
	ATOM	5608	OWO WAT W 328	97.306	58.698	55.730	1.00	29.97	O
	ATOM	5609	OWO WAT W 329	1.103	33.975	2.990	1.00	27.32	O
	ATOM	5610	OWO WAT W 330	95.971	29.630	41.472	1.00	30.41	O
20	ATOM	5611	OWO WAT W 331	16.024	18.884	15.743	1.00	29.17	O
	ATOM	5612	OWO WAT W 332	27.809	11.157	25.200	1.00	30.61	O
	ATOM	5613	OWO WAT W 333	−1.326	42.074	32.207	1.00	29.44	O
	ATOM	5614	OWO WAT W 334	66.229	26.723	53.908	1.00	28.34	O
	ATOM	5615	OWO WAT W 335	82.875	68.031	63.132	1.00	29.46	O
25	ATOM	5616	OWO WAT W 336	−12.736	25.892	19.018	1.00	28.43	O
	ATOM	5617	OWO WAT W 337	−17.566	18.438	30.318	1.00	30.00	O
	ATOM	5618	OWO WAT W 338	65.522	57.310	34.740	1.00	30.96	O
	ATOM	5619	OWO WAT W 339	−6.290	7.159	28.401	1.00	30.34	O
	ATOM	5620	OWO WAT W 340	23.527	9.034	29.711	1.00	28.94	O
30	ATOM	5621	OWO WAT W 341	−0.784	26.671	−6.584	1.00	28.64	O
	ATOM	5622	OWO WAT W 342	8.616	23.088	11.577	1.00	30.35	O
	ATOM	5623	OWO WAT W 343	24.773	10.158	37.418	1.00	29.89	O
	ATOM	5624	OWO WAT W 344	72.679	55.487	52.949	1.00	31.54	O
	ATOM	5625	OWO WAT W 345	94.866	28.562	52.364	1.00	30.19	O
35	ATOM	5626	OWO WAT W 346	99.204	47.352	59.959	1.00	31.06	O
	ATOM	5627	OWO WAT W 347	79.996	55.556	70.962	1.00	28.95	O
	ATOM	5628	OWO WAT W 348	76.316	21.590	51.720	1.00	29.91	O
	ATOM	5629	OWO WAT W 349	4.599	39.136	5.796	1.00	29.66	O
	ATOM	5630	OWO WAT W 350	75.589	46.881	24.460	1.00	28.94	O
40	ATOM	5631	OWO WAT W 351	24.519	13.348	31.326	1.00	30.49	O
	ATOM	5632	OWO WAT W 352	75.376	63.962	27.293	1.00	30.22	O
	ATOM	5633	OWO WAT W 353	2.009	41.617	29.520	1.00	29.57	O
	ATOM	5634	OWO WAT W 354	90.628	52.219	26.037	1.00	31.09	O
	ATOM	5635	OWO WAT W 355	6.909	25.101	9.329	1.00	31.47	O
45	ATOM	5636	OWO WAT W 356	−9.688	6.343	14.903	1.00	31.00	O
	ATOM	5637	OWO WAT W 357	−8.446	36.765	26.024	1.00	28.75	O
	ATOM	5638	OWO WAT W 358	1.786	15.615	22.054	1.00	30.80	O
	ATOM	5639	OWO WAT W 359	5.342	16.438	20.569	1.00	30.57	O
	ATOM	5640	OWO WAT W 360	101.587	56.705	47.092	1.00	30.70	O
50	ATOM	5641	OWO WAT W 361	78.855	48.593	19.223	1.00	29.57	O
	ATOM	5642	OWO WAT W 362	72.050	54.063	62.527	1.00	29.18	O
	ATOM	5643	OWO WAT W 363	98.278	55.802	56.307	1.00	28.50	O
	ATOM	5644	OWO WAT W 364	22.116	20.797	38.337	1.00	31.08	O
	ATOM	5645	OWO WAT W 365	98.267	49.593	37.978	1.00	30.88	O
55	ATOM	5646	OWO WAT W 366	89.304	41.415	70.152	1.00	29.26	O
	ATOM	5647	OWO WAT W 367	26.924	26.855	14.252	1.00	31.01	O
	ATOM	5648	OWO WAT W 368	79.838	33.248	66.816	1.00	31.71	O
	ATOM	5649	OWO WAT W 369	88.280	48.115	28.555	1.00	30.50	O
	ATOM	5650	OWO WAT W 370	88.204	31.834	63.029	1.00	33.05	O

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   ATOM    5651  OWO WAT W 371      76.513  65.078  49.599  1.00 31.02        O
   ATOM    5652  OWO WAT W 372      75.329  46.176  68.991  1.00 32.58        O
   ATOM    5653  OWO WAT W 373      -0.010  11.653  33.304  1.00 30.13        O
   ATOM    5654  OWO WAT W 374      73.773  42.211  47.287  1.00 30.75        O
 5 ATOM    5655  OWO WAT W 375       9.301  47.618  11.918  1.00 31.65        O
   ATOM    5656  OWO WAT W 376      77.883  66.984  50.889  1.00 28.98        O
   ATOM    5657  OWO WAT W 377      88.383  65.062  63.338  1.00 31.27        O
   ATOM    5658  OWO WAT W 378      83.213  42.295  31.445  1.00 30.26        O
   ATOM    5659  OWO WAT W 379       8.900  38.448  30.589  1.00 30.35        O
10 ATOM    5660  OWO WAT W 380     -15.964  19.226   5.225  1.00 32.40        O
   ATOM    5661  OWO WAT W 381      85.952  42.207  30.510  1.00 28.58        O
   ATOM    5662  OWO WAT W 382      76.757  31.278  66.593  1.00 30.65        O
   ATOM    5663  OWO WAT W 383      67.112  43.852  61.088  1.00 31.00        O
   ATOM    5664  OWO WAT W 384      15.615  39.446   9.263  1.00 32.04        O
15 ATOM    5665  OWO WAT W 385      69.642  43.139  46.873  1.00 31.22        O
   ATOM    5666  OWO WAT W 386      31.518  22.573  23.210  1.00 31.93        O
   ATOM    5667  OWO WAT W 387      63.017  32.998  57.058  1.00 32.45        O
   ATOM    5668  OWO WAT W 388     -14.772  14.046  31.412  1.00 31.27        O
   ATOM    5669  OWO WAT W 389     -13.321  20.853  36.036  1.00 32.07        O
20 ATOM    5670  OWO WAT W 390      93.686  32.410  63.798  1.00 31.17        O
   ATOM    5671  OWO WAT W 391     -11.103  31.985   1.195  1.00 30.72        O
   ATOM    5672  OWO WAT W 392      97.080  54.381  67.546  1.00 30.22        O
   ATOM    5673  OWO WAT W 393      -2.111  18.265  42.480  1.00 31.18        O
   ATOM    5674  OWO WAT W 394      -5.929  23.964  40.862  1.00 30.28        O
25 ATOM    5675  OWO WAT W 395      21.915  37.827  14.330  1.00 33.03        O
   ATOM    5676  OWO WAT W 396      19.319  18.346  13.246  1.00 32.13        O
   ATOM    5677  OWO WAT W 397      -9.126  31.258  -0.198  1.00 30.48        O
   ATOM    5678  OWO WAT W 398     -21.801  15.010  25.800  1.00 33.55        O
   ATOM    5679  OWO WAT W 399      -4.389  22.584  42.572  1.00 31.58        O
30 ATOM    5680  OWO WAT W 400      65.696  43.778  41.962  1.00 32.13        O
   ATOM    5681  OWO WAT W 401      67.742  40.670  35.666  1.00 30.46        O
   ATOM    5682  OWO WAT W 402      65.746  65.473  48.225  1.00 32.12        O
   ATOM    5683  OWO WAT W 403      87.502  45.650  72.896  1.00 31.14        O
   ATOM    5684  OWO WAT W 404      20.347  10.990  18.557  1.00 31.27        O
35 ATOM    5685  OWO WAT W 405      15.616  45.084  22.923  1.00 32.88        O
   ATOM    5686  OWO WAT W 406      -6.379  40.078  17.839  1.00 31.01        O
   ATOM    5687  OWO WAT W 407      77.148  66.360  31.211  1.00 32.64        O
   ATOM    5688  OWO WAT W 408       6.977  14.530  16.868  1.00 31.00        O
   ATOM    5689  OWO WAT W 409      78.177  42.939  37.862  1.00 32.39        O
40 ATOM    5690  OWO WAT W 410      75.225  37.363  44.416  1.00 32.01        O
   ATOM    5691  OWO WAT W 411      -9.041  12.166  21.117  1.00 32.20        O
   ATOM    5692  OWO WAT W 412     -16.217  22.314   9.910  1.00 32.51        O
   ATOM    5693  OWO WAT W 413     -16.765  23.503   7.036  1.00 32.78        O
   ATOM    5694  OWO WAT W 414      69.644  27.547  47.067  1.00 31.72        O
45 ATOM    5695  OWO WAT W 415     -15.707  15.702   9.582  1.00 33.06        O
   ATOM    5696  OWO WAT W 416      62.467  37.292  56.900  1.00 32.91        O
   ATOM    5697  OWO WAT W 417      73.578  56.461  55.982  1.00 31.47        O
   ATOM    5698  OWO WAT W 418      62.550  38.303  60.944  1.00 32.02        O
   ATOM    5699  OWO WAT W 419      93.690  29.703  40.077  1.00 30.62        O
50 ATOM    5700  OWO WAT W 420      -2.517  30.733  48.899  1.00 31.32        O
   ATOM    5701  OWO WAT W 421      17.987  36.813  35.779  1.00 32.43        O
   ATOM    5702  OWO WAT W 422      -0.603  35.756  40.064  1.00 34.10        O
   ATOM    5703  OWO WAT W 423      10.769   6.634  30.181  1.00 32.55        O
   ATOM    5704  OWO WAT W 424      81.119  25.332  60.295  1.00 32.94        O
55 ATOM    5705  OWO WAT W 425      10.855  10.621  12.982  1.00 31.60        O
   ATOM    5706  OWO WAT W 426      85.161  57.719  69.037  1.00 32.81        O
   ATOM    5707  OWO WAT W 427      89.645  64.217  61.148  1.00 34.30        O
   ATOM    5708  OWO WAT W 428      14.217   4.617  37.812  1.00 32.90        O
   ATOM    5709  OWO WAT W 429      79.717  40.252  36.441  1.00 32.15        O
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	ATOM	5710	OWO WAT W 430	96.611	39.539	56.194	1.00	32.67		O
	ATOM	5711	OWO WAT W 431	83.825	71.440	51.248	1.00	34.89		O
	ATOM	5712	OWO WAT W 432	63.076	53.522	44.892	1.00	32.71		O
	ATOM	5713	OWO WAT W 433	1.793	39.751	32.248	1.00	31.74		O
5	ATOM	5714	OWO WAT W 434	7.509	15.071	20.571	1.00	32.45		O
	ATOM	5715	OWO WAT W 435	87.907	67.566	34.260	1.00	32.31		O
	ATOM	5716	OWO WAT W 436	73.062	34.735	66.838	1.00	33.20		O
	ATOM	5717	OWO WAT W 437	9.377	24.058	1.441	1.00	31.00		O
	ATOM	5718	OWO WAT W 438	71.507	59.603	32.113	1.00	33.60		O
10	ATOM	5719	OWO WAT W 439	2.503	4.737	9.893	1.00	33.38		O
	ATOM	5720	OWO WAT W 440	18.348	15.377	16.447	1.00	32.53		O
	ATOM	5721	OWO WAT W 441	23.326	22.289	35.972	1.00	33.15		O
	ATOM	5722	OWO WAT W 442	96.229	51.515	70.636	1.00	34.46		O
	ATOM	5723	OWO WAT W 443	87.126	64.081	47.478	1.00	33.24		O
15	ATOM	5724	OWO WAT W 444	2.034	19.051	-6.435	1.00	32.01		O
	ATOM	5725	OWO WAT W 445	5.619	39.208	30.464	1.00	32.83		O
	ATOM	5726	OWO WAT W 446	62.240	51.450	36.949	1.00	33.03		O
	ATOM	5727	OWO WAT W 447	-6.360	35.580	35.084	1.00	32.64		O
	ATOM	5728	OWO WAT W 448	-16.362	24.399	13.206	1.00	32.67		O
20	ATOM	5729	OWO WAT W 449	-4.304	43.530	13.748	1.00	34.24		O
	ATOM	5730	OWO WAT W 450	73.798	51.681	25.011	1.00	30.52		O
	ATOM	5731	OWO WAT W 451	-14.918	12.722	35.144	1.00	32.68		O
	ATOM	5732	OWO WAT W 452	85.074	65.041	49.650	1.00	34.07		O
	ATOM	5733	OWO WAT W 453	-11.926	28.889	39.111	1.00	34.00		O
25	ATOM	5734	OWO WAT W 454	96.844	56.355	64.597	1.00	31.66		O
	ATOM	5735	OWO WAT W 455	96.000	55.934	36.767	1.00	34.06		O
	ATOM	5736	OWO WAT W 456	71.256	69.262	41.963	1.00	31.80		O
	ATOM	5737	OWO WAT W 457	3.783	33.221	3.346	1.00	34.65		O
	ATOM	5738	OWO WAT W 458	84.579	31.320	65.966	1.00	33.69		O
30	ATOM	5739	OWO WAT W 459	101.511	33.113	49.526	1.00	32.83		O
	ATOM	5740	OWO WAT W 460	95.878	33.666	64.881	1.00	33.85		O
	ATOM	5741	OWO WAT W 461	67.042	56.019	46.154	1.00	31.64		O
	ATOM	5742	OWO WAT W 462	22.413	30.668	10.728	1.00	33.39		O
	ATOM	5743	OWO WAT W 463	-9.497	10.447	8.753	1.00	35.70		O
35	ATOM	5744	OWO WAT W 464	14.729	20.358	11.887	1.00	33.61		O
	ATOM	5745	OWO WAT W 465	92.689	63.328	63.676	1.00	31.71		O
	ATOM	5746	OWO WAT W 466	15.981	43.467	27.839	1.00	30.27		O
	ATOM	5747	OWO WAT W 467	16.882	39.161	12.466	1.00	33.44		O
	ATOM	5748	OWO WAT W 468	28.031	22.957	32.264	1.00	32.89		O
40	ATOM	5749	OWO WAT W 469	-6.646	34.418	-1.404	1.00	36.83		O
	ATOM	5750	OWO WAT W 470	-13.840	28.684	27.438	1.00	34.43		O
	ATOM	5751	OWO WAT W 471	-2.396	37.137	36.497	1.00	34.74		O
	ATOM	5752	OWO WAT W 472	6.953	49.811	9.092	1.00	34.54		O
	ATOM	5753	OWO WAT W 473	75.076	54.086	21.905	1.00	32.21		O
45	ATOM	5754	OWO WAT W 474	20.045	28.872	34.962	1.00	34.48		O
	ATOM	5755	OWO WAT W 475	100.497	60.231	49.583	1.00	33.76		O
	ATOM	5756	OWO WAT W 476	66.281	28.570	48.683	1.00	33.64		O
	ATOM	5757	OWO WAT W 477	68.813	29.894	59.688	1.00	31.09		O
	ATOM	5758	OWO WAT W 478	10.065	47.685	22.178	1.00	33.96		O
50	ATOM	5759	OWO WAT W 479	12.553	46.154	27.739	1.00	33.98		O
	ATOM	5760	OWO WAT W 480	81.162	41.327	38.156	1.00	33.89		O
	ATOM	5761	OWO WAT W 481	29.486	16.634	20.506	1.00	35.11		O
	ATOM	5762	OWO WAT W 482	7.059	20.591	15.062	1.00	33.39		O
	ATOM	5763	OWO WAT W 483	94.321	48.607	31.411	1.00	32.81		O
55	ATOM	5764	OWO WAT W 484	78.394	45.611	69.111	1.00	32.11		O
	ATOM	5765	OWO WAT W 485	103.001	46.778	44.265	1.00	37.49		O
	ATOM	5766	OWO WAT W 486	98.032	44.220	57.538	1.00	34.11		O
	ATOM	5767	OWO WAT W 487	6.769	35.856	36.005	1.00	34.21		O
	ATOM	5768	OWO WAT W 488	13.875	5.362	28.985	1.00	32.93		O

	ATOM	5769	OWO WAT W 489	77.757	29.704	64.840	1.00	35.79		O
	ATOM	5770	OWO WAT W 490	89.374	59.183	73.080	1.00	36.26		O
	ATOM	5771	OWO WAT W 491	65.505	58.340	42.785	1.00	34.38		O
	ATOM	5772	OWO WAT W 492	24.675	30.016	14.680	1.00	33.91		O
5	ATOM	5773	OWO WAT W 493	71.773	48.416	28.198	1.00	33.25		O
	ATOM	5774	OWO WAT W 494	94.516	43.259	64.022	1.00	34.72		O
	ATOM	5775	OWO WAT W 495	60.811	34.614	63.880	1.00	31.02		O
	ATOM	5776	OWO WAT W 496	73.777	59.268	68.651	1.00	35.19		O
	ATOM	5777	OWO WAT W 497	-10.726	11.003	20.019	1.00	35.33		O
10	ATOM	5778	OWO WAT W 498	71.418	40.353	45.182	1.00	32.91		O
	ATOM	5779	OWO WAT W 499	9.199	30.962	41.877	1.00	34.45		O
	ATOM	5780	OWO WAT W 500	72.077	23.932	57.680	1.00	36.33		O
	ATOM	5781	OWO WAT W 501	72.506	28.771	61.951	1.00	33.78		O
	ATOM	5782	OWO WAT W 502	103.799	43.338	51.445	1.00	33.59		O
15	ATOM	5783	OWO WAT W 503	82.416	60.311	16.938	1.00	33.25		O
	ATOM	5784	OWO WAT W 504	-3.011	7.366	27.822	1.00	34.57		O
	ATOM	5785	OWO WAT W 505	-9.596	38.288	4.215	1.00	33.00		O
	ATOM	5786	OWO WAT W 506	12.013	17.962	8.600	1.00	35.63		O
	ATOM	5787	OWO WAT W 507	-13.941	14.680	33.978	1.00	35.53		O
20	ATOM	5788	OWO WAT W 508	76.322	27.722	63.060	1.00	36.69		O
	ATOM	5789	OWO WAT W 509	81.219	44.657	26.709	1.00	37.06		O
	ATOM	5790	OWO WAT W 510	2.548	14.368	24.152	1.00	34.66		O
	ATOM	5791	OWO WAT W 511	-13.753	26.339	30.672	1.00	35.10		O
	ATOM	5792	OWO WAT W 512	11.919	50.176	22.278	1.00	37.16		O
25	ATOM	5793	OWO WAT W 513	74.368	44.836	44.299	1.00	36.67		O
	ATOM	5794	OWO WAT W 514	11.018	12.445	16.456	1.00	36.59		O
	ATOM	5795	OWO WAT W 515	69.430	67.096	54.901	1.00	34.94		O
	ATOM	5796	OWO WAT W 516	70.579	53.120	28.005	1.00	36.81		O
	ATOM	5797	OWO WAT W 517	-19.986	22.423	9.720	1.00	35.08		O
30	ATOM	5798	OWO WAT W 518	-16.065	14.730	15.618	1.00	35.04		O
	ATOM	5799	OWO WAT W 519	98.582	36.574	61.845	1.00	36.95		O
	ATOM	5800	OWO WAT W 520	104.579	41.134	50.455	1.00	33.98		O
	ATOM	5801	OWO WAT W 521	74.033	51.539	53.283	1.00	36.14		O
	ATOM	5802	OWO WAT W 522	74.217	65.218	49.171	1.00	34.63		O
35	ATOM	5803	OWO WAT W 523	62.562	55.892	40.268	1.00	36.50		O
	ATOM	5804	OWO WAT W 524	11.004	21.679	13.444	1.00	35.78		O
	ATOM	5805	OWO WAT W 525	25.126	20.816	35.045	1.00	35.31		O
	ATOM	5806	OWO WAT W 526	1.452	3.665	14.210	1.00	36.43		O
	ATOM	5807	OWO WAT W 527	80.692	66.914	48.011	1.00	37.83		O
40	ATOM	5808	OWO WAT W 528	95.870	52.105	34.696	1.00	36.85		O
	ATOM	5809	OWO WAT W 529	86.261	61.322	68.248	1.00	35.35		O
	ATOM	5810	OWO WAT W 530	89.178	39.761	31.299	1.00	36.12		O
	ATOM	5811	OWO WAT W 531	14.154	30.763	4.163	1.00	32.64		O
	ATOM	5812	OWO WAT W 532	61.028	37.846	67.190	1.00	37.73		O
45	ATOM	5813	OWO WAT W 533	80.451	67.958	30.138	1.00	36.25		O
	ATOM	5814	OWO WAT W 534	104.692	40.494	36.258	1.00	38.06		O
	ATOM	5815	OWO WAT W 535	61.359	49.752	42.923	1.00	34.56		O
	ATOM	5816	OWO WAT W 536	101.855	51.986	39.650	1.00	36.35		O
	ATOM	5817	OWO WAT W 537	16.177	39.484	5.672	1.00	34.69		O
50	ATOM	5818	OWO WAT W 538	98.851	45.884	55.781	1.00	33.32		O
	ATOM	5819	OWO WAT W 539	-1.538	44.304	23.105	1.00	36.19		O
	ATOM	5820	OWO WAT W 540	89.539	49.486	76.110	1.00	35.64		O
	ATOM	5821	OWO WAT W 541	17.816	38.933	43.133	1.00	35.39		O
	ATOM	5822	OWO WAT W 542	96.229	39.789	66.441	1.00	39.58		O
55	ATOM	5823	OWO WAT W 543	88.906	65.280	58.671	1.00	35.15		O
	ATOM	5824	OWO WAT W 544	85.813	46.260	25.593	1.00	38.20		O
	ATOM	5825	OWO WAT W 545	9.797	20.449	9.200	1.00	34.22		O
	ATOM	5826	OWO WAT W 546	12.525	13.782	35.553	1.00	35.17		O
	ATOM	5827	OWO WAT W 547	85.180	60.452	18.548	1.00	36.21		O

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   ATOM    5828  OWO WAT W 548   -15.486  15.357  18.179  1.00 35.75  .        O
   ATOM    5829  OWO WAT W 549    85.633  31.453  63.091  1.00 35.06           O
   ATOM    5830  OWO WAT W 550     9.019  39.082   3.744  1.00 37.38           O
   ATOM    5831  OWO WAT W 551    89.696  29.864  62.494  1.00 34.43           O
 5 ATOM    5832  OWO WAT W 552    68.228  38.229  69.799  1.00 36.46           O
   ATOM    5833  OWO WAT W 553   -17.893  12.705  28.165  1.00 36.75           O
   ATOM    5834  OWO WAT W 554    68.948  49.043  66.497  1.00 37.57           O
   ATOM    5835  OWO WAT W 555    83.919  42.363  72.389  1.00 40.37           O
   ATOM    5836  OWO WAT W 556    25.314  30.611  33.086  1.00 34.52           O
10 ATOM    5837  OWO WAT W 557    77.220  35.864  69.291  1.00 33.32           O
   ATOM    5838  OWO WAT W 558     2.291  37.566   6.740  1.00 36.83           O
   ATOM    5839  OWO WAT W 559    98.075  63.224  52.442  1.00 34.77           O
   ATOM    5840  OWO WAT W 560    85.352  28.871  62.439  1.00 34.82           O
   ATOM    5841  OWO WAT W 561   -11.196  16.225  -2.484  1.00 37.06           O
15 ATOM    5842  OWO WAT W 562    13.081  14.249  11.142  1.00 36.06           O
   ATOM    5843  OWO WAT W 563    -8.130  34.083· 10.362  1.00 38.67           O
   ATOM    5844  OWO WAT W 564   100.638  53.761  58.659  1.00 37.64           O
   ATOM    5845  OWO WAT W 565    14.411  10.706   9.080  1.00 36.65           O
   ATOM    5846  OWO WAT W 566    95.661  34.263  36.437  1.00 37.56           O
20 ATOM    5847  OWO WAT W 567    -4.003  39.369  32.324  1.00 37.19           O
   ATOM    5848  OWO WAT W 568    78.167  65.509  67.240  1.00 39.89           O
   ATOM    5849  OWO WAT W 569    11.430  21.522  41.081  1.00 36.40           O
   ATOM    5850  OWO WAT W 570    91.654  35.481  69.727  1.00 37.85           O
   ATOM    5851  OWO WAT W 571    79.278  20.274  55.621  1.00 40.15           O
25 ATOM    5852  OWO WAT W 572    72.304  67.008  50.584  1.00 36.29 ·         O
   ATOM    5853  OWO WAT W 573    12.213  17.300  31.022  1.00 36.16           O
   ATOM    5854  OWO WAT W 574    11.065  42.818  30.308  1.00 36.94           O
   ATOM    5855  OWO WAT W 575   -15.594  28.700  25.166  1.00 36.91           O
   ATOM    5856  OWO WAT W 576    87.785  66.643  45.876  1.00 35.99           O
30 ATOM    5857  OWO WAT W 577    82.829  61.753  68.534  1.00 34.15           O
   ATOM    5858  OWO WAT W 578    96.712  58.463  42.966  1.00 35.86           O
   ATOM    5859  OWO WAT W 579    90.547  66.319  52.850  1.00 38.01           O
   ATOM    5860  OWO WAT W 580    93.624  64.547  47.146  1.00 35.33           O
   ATOM    5861  OWO WAT W 581    63.876  47.679  34.817  1.00 38.21           O
35 ATOM    5862  OWO WAT W 582     1.173  12.329  25.005  1.00 36.02           O
   ATOM    5863  OWO WAT W 583    17.049  13.321  17.022  1.00 24.70           O
   ATOM    5864  OWO WAT W 584    -2.453  39.193   5.791  1.00 34.93           O
   ATOM    5865  OWO WAT W 585    77.377  24.679  60.845  1.00 37.01           O
   ATOM    5866  OWO WAT W 586    -4.261   4.696   8.136  1.00 37.88  ·        O
40 ATOM    5867  OWO WAT W 587    72.030  20.663  48.169  1.00 32.21           O
   ATOM    5868  OWO WAT W 588   103.047  54.216  55.606  1.00 38.30           O
   ATOM    5869  OWO WAT W 589    62.056  41.403  66.235  1.00 39.59           O
   ATOM    5870  OWO WAT W 590    69.116  34.560  47.273  1.00 37.52           O
   ATOM    5871  OWO WAT W 591     5.299  26.765  -2.580  1.00 39.03           O
45 ATOM    5872  OWO WAT W 592     7.851   4.451   7.230  1.00 39.90           O
   ATOM    5873  OWO WAT W 593     3.381  11.538   2.722  1.00 35.14           O
   ATOM    5874  OWO WAT W 594    70.201  61.627  59.466  1.00 37.04           O
   ATOM    5875  OWO WAT W 595   101.239  46.975  56.213  1.00 37.59           O
   ATOM    5876  OWO WAT W 596    78.651  63.616  69.537  1.00 38.62           O
50 ATOM    5877  OWO WAT W 597    87.272  23.489  51.720  1.00 41.05           O
   ATOM    5878  OWO WAT W 598   -10.330  32.285  11.054  1.00 39.70           O
   ATOM    5879  OWO WAT W 599    89.287  33.132  35.384  1.00 36.85          ‹O
   ATOM    5880  OWO WAT W 600    72.681  37.485  44.016  1.00 40.76         ‹⟩O
   ATOM    5881  OWO WAT W 601     6.186  21.586  -1.938  1.00 37.14          ‹O
55 ATOM    5882  OWO WAT W 602    19.150  31.374  35.226  1.00 39.73           O
   ATOM    5883  OWO WAT W 603    89.943  30.865  36.200  1.00 36.05           O
   ATOM    5884  OWO WAT W 604     6.566  14.646   0.868  1.00 39.91           O
   ATOM    5885  OWO WAT W 605   102.465  33.485  55.010  1.00 34.32           O
   ATOM    5886  OWO WAT W 606   101.894  53.829  37.270  1.00 38.18           O
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	ATOM	5887	OWO	WAT	W	607	87.521	28.175	42.171	1.00 37.58	O
	ATOM	5888	OWO	WAT	W	608	71.639	50.540	23.811	1.00 38.19	O
	ATOM	5889	OWO	WAT	W	609	103.850	43.189	44.252	1.00 39.03	O
	ATOM	5890	OWO	WAT	W	610	79.919	66.791	18.426	1.00 41.53	O
5	ATOM	5891	OWO	WAT	W	611	22.945	32.780	14.876	1.00 34.39	O
	ATOM	5892	OWO	WAT	W	612	−6.425	36.916	12.432	1.00 35.27	O
	ATOM	5893	OWO	WAT	W	613	103.393	36.820	51.468	1.00 38.09	O
	ATOM	5894	OWO	WAT	W	614	84.674	36.411	69.979	1.00 36.89	O
	ATOM	5895	OWO	WAT	W	615	71.088	52.342	54.383	1.00 43.94	O
10	ATOM	5896	OWO	WAT	W	616	81.351	67.541	24.003	1.00 35.74	O
	ATOM	5897	OWO	WAT	W	617	93.560	55.832	22.511	1.00 50.17	O
	ATOM	5898	OWO	WAT	W	618	84.136	69.091	49.838	1.00 41.33	O
	ATOM	5899	OWO	WAT	W	619	64.940	49.108	48.394	1.00 37.74	O
	ATOM	5900	OWO	WAT	W	620	2.665	46.841	14.692	1.00 39.07	O
15	ATOM	5901	OWO	WAT	W	621	99.738	60.325	45.893	1.00 36.08	O
	ATOM	5902	OWO	WAT	W	622	86.148	29.099	38.975	1.00 34.64	O
	ATOM	5903	OWO	WAT	W	623	−2.502	13.269	26.328	1.00 36.55	O
	ATOM	5904	OWO	WAT	W	624	88.662	27.282	61.964	1.00 41.22	O
	ATOM	5905	OWO	WAT	W	625	14.262	15.472	7.561	1.00 37.33	O
20	ATOM	5906	OWO	WAT	W	626	65.127	51.794	48.053	1.00 40.14	O
	ATOM	5907	OWO	WAT	W	627	93.290	67.912	55.616	1.00 39.49	O
	ATOM	5908	OWO	WAT	W	628	−3.988	9.437	35.385	1.00 40.11	O
	ATOM	5909	OWO	WAT	W	629	92.772	43.143	30.995	1.00 40.79	O
	ATOM	5910	OWO	WAT	W	630	73.931	63.142	17.034	1.00 34.53	O
25	ATOM	5911	OWO	WAT	W	631	20.339	39.005	11.660	1.00 42.20	O
	ATOM	5912	OWO	WAT	W	632	4.096	21.094	45.525	1.00 31.66	O
	ATOM	5913	OWO	WAT	W	633	−1.502	7.283	16.652	1.00 41.72	O
	ATOM	5914	OWO	WAT	W	634	23.127	12.995	37.830	1.00 35.93	O
	ATOM	5915	OWO	WAT	W	635	20.482	6.101	32.242	1.00 38.43	O
30	ATOM	5916	OWO	WAT	W	636	105.998	50.158	46.365	1.00 43.98	O
	ATOM	5917	OWO	WAT	W	637	97.647	61.168	54.360	1.00 41.64	O
	ATOM	5918	OWO	WAT	W	638	31.773	17.209	19.642	1.00 43.04	O
	ATOM	5919	OWO	WAT	W	639	95.597	47.557	33.970	1.00 39.95	O
	ATOM	5920	OWO	WAT	W	640	86.892	46.712	76.072	1.00 40.36	O
35	ATOM	5921	OWO	WAT	W	641	15.550	35.912	6.020	1.00 36.75	O
	ATOM	5922	OWO	WAT	W	642	−15.301	21.138	−4.031	1.00 38.85	O
	ATOM	5923	OWO	WAT	W	643	−9.762	25.136	39.215	1.00 41.44	O
	ATOM	5924	OWO	WAT	W	644	90.558	58.656	75.134	1.00 46.13	O
	ATOM	5925	OWO	WAT	W	645	66.247	46.236	62.249	1.00 39.42	O
40	ATOM	5926	OWO	WAT	W	646	71.142	40.474	40.944	1.00 36.49	O
	ATOM	5927	OWO	WAT	W	647	77.446	48.504	23.425	1.00 38.60	O
	ATOM	5928	OWO	WAT	W	648	104.114	48.119	59.318	1.00 37.83	O
	ATOM	5929	OWO	WAT	W	649	101.742	43.229	56.344	1.00 38.57	O
	ATOM	5930	OWO	WAT	W	650	−15.216	26.550	18.282	1.00 41.02	O
45	ATOM	5931	OWO	WAT	W	651	81.533	73.256	58.329	1.00 43.24	O
	ATOM	5932	OWO	WAT	W	652	95.421	27.742	50.189	1.00 36.56	O
	ATOM	5933	OWO	WAT	W	653	66.407	63.471	57.158	1.00 40.06	O
	ATOM	5934	OWO	WAT	W	654	95.111	62.749	63.048	1.00 44.41	O
	ATOM	5935	OWO	WAT	W	655	74.563	73.382	48.784	1.00 38.15	O
50	ATOM	5936	OWO	WAT	W	656	100.257	49.012	62.406	1.00 38.80	O
	ATOM	5937	OWO	WAT	W	657	70.436	27.659	60.745	1.00 40.98	O
	ATOM	5938	OWO	WAT	W	658	61.433	39.445	63.329	1.00 37.65	O
	ATOM	5939	OWO	WAT	W	659	70.260	64.484	61.726	1.00 36.07	O
	ATOM	5940	OWO	WAT	W	660	−2.658	11.192	37.261	1.00 41.10	O
55	ATOM	5941	OWO	WAT	W	661	20.907	40.221	15.814	1.00 42.41	O
	ATOM	5942	OWO	WAT	W	662	70.216	52.007	62.455	1.00 42.64	O
	ATOM	5943	OWO	WAT	W	663	95.740	46.358	66.747	1.00 40.91	O
	ATOM	5944	OWO	WAT	W	664	10.857	34.594	38.679	1.00 36.48	O
	ATOM	5945	OWO	WAT	W	665	−6.107	5.304	14.570	1.00 39.62	O

	ATOM	5946	OWO	WAT	W	666	-16.276	14.755	35.074	1.00 41.63	O
	ATOM	5947	OWO	WAT	W	667	26.827	31.094	30.281	1.00 45.88	O
	ATOM	5948	OWO	WAT	W	668	92.316	38.631	67.761	1.00 39.88	O
	ATOM	5949	OWO	WAT	W	669	2.195	44.374	24.480	1.00 39.74	O
5	ATOM	5950	OWO	WAT	W	670	62.192	61.183	53.567	1.00 42.79	O
	ATOM	5951	OWO	WAT	W	671	-1.352	16.999	-7.023	1.00 38.41	O
	ATOM	5952	OWO	WAT	W	672	-8.831	10.745	6.254	1.00 40.01	O
	ATOM	5953	OWO	WAT	W	673	84.299	24.783	40.930	1.00 40.82	O
	ATOM	5954	OWO	WAT	W	674	8.890	11.430	18.541	1.00 37.72	O
10	ATOM	5955	OWO	WAT	W	675	-2.401	37.790	8.487	1.00 46.85	O
	ATOM	5956	OWO	WAT	W	676	9.877	18.962	16.054	1.00 38.73	O
	ATOM	5957	OWO	WAT	W	677	98.749	57.708	32.395	1.00 38.75	O
	ATOM	5958	OWO	WAT	W	678	27.038	14.823	31.631	1.00 43.43	O
	ATOM	5959	OWO	WAT	W	679	5.159	44.811	2.754	1.00 42.38	O
15	ATOM	5960	OWO	WAT	W	680	0.002	16.722	44.562	1.00 40.70	O
	ATOM	5961	OWO	WAT	W	681	22.123	23.904	38.391	1.00 39.40	O
	ATOM	5962	OWO	WAT	W	682	99.563	61.279	52.511	1.00 44.15	O
	ATOM	5963	OWO	WAT	W	683	-1.451	40.549	3.912	1.00 42.18	O
	ATOM	5964	OWO	WAT	W	684	4.221	5.039	8.017	1.00 41.21	O
20	ATOM	5965	OWO	WAT	W	685	-22.071	15.836	29.229	1.00 44.50	O
	ATOM	5966	OWO	WAT	W	686	99.011	54.058	61.303	1.00 43.85	O
	ATOM	5967	OWO	WAT	W	687	74.967	70.644	60.446	1.00 42.55	O
	ATOM	5968	OWO	WAT	W	688	-10.616	31.358	36.752	1.00 41.03	O
	ATOM	5969	OWO	WAT	W	689	-12.072	13.240	20.060	1.00 44.10	O
25	ATOM	5970	OWO	WAT	W	690	69.547	44.618	50.827	1.00 37.25	O
	ATOM	5971	OWO	WAT	W	691	86.842	68.840	47.381	1.00 37.96	O
	ATOM	5972	OWO	WAT	W	692	86.463	31.407	68.209	1.00 45.03	O
	ATOM	5973	OWO	WAT	W	693	21.528	8.241	33.245	1.00 43.60	O
	ATOM	5974	OWO	WAT	W	694	-6.871	42.650	13.755	1.00 44.10	O
30	ATOM	5975	OWO	WAT	W	695	14.634	47.238	23.747	1.00 36.05	O
	ATOM	5976	OWO	WAT	W	696	89.838	46.959	76.362	1.00 41.33	O
	ATOM	5977	OWO	WAT	W	697	89.600	24.884	57.262	1.00 39.92	O
	ATOM	5978	OWO	WAT	W	698	90.979	50.260	28.177	1.00 41.17	O
	ATOM	5979	OWO	WAT	W	699	26.549	32.896	28.446	1.00 47.23	O
35	ATOM	5980	OWO	WAT	W	700	-16.697	31.105	15.187	1.00 42.32	O
	ATOM	5981	OWO	WAT	W	701	81.076	69.446	26.253	1.00 34.04	O
	ATOM	5982	OWO	WAT	W	702	71.570	30.554	63.576	1.00 44.16	O
	ATOM	5983	OWO	WAT	W	703	97.303	28.496	48.839	1.00 40.54	O
	ATOM	5984	OWO	WAT	W	704	1.795	29.119	-5.665	1.00 33.67	O
40	ATOM	5985	OWO	WAT	W	705	96.236	54.557	28.734	1.00 35.82	O
	ATOM	5986	OWO	WAT	W	706	-13.636	17.353	17.863	1.00 43.02	O
	ATOM	5987	OWO	WAT	W	707	7.130	10.663	31.635	1.00 40.68	O
	ATOM	5988	OWO	WAT	W	708	85.248	24.307	46.033	1.00 33.28	O
	ATOM	5989	OWO	WAT	W	709	0.838	12.439	-1.210	1.00 43.67	O
45	ATOM	5990	OWO	WAT	W	710	-4.956	35.976	38.069	1.00 43.69	O
	ATOM	5991	OWO	WAT	W	711	22.149	13.931	18.661	1.00 41.93	O
	ATOM	5992	OWO	WAT	W	712	8.199	6.931	30.023	1.00 38.91	O
	ATOM	5993	OWO	WAT	W	713	2.981	30.560	0.424	1.00 39.67	O
	ATOM	5994	OWO	WAT	W	714	4.323	18.977	-5.385	1.00 47.90	O
50	ATOM	5995	OWO	WAT	W	715	98.043	52.291	36.484	1.00 49.71	O
	ATOM	5996	OWO	WAT	W	716	3.433	37.733	33.971	1.00 42.51	O
	ATOM	5997	OWO	WAT	W	717	87.208	24.173	56.885	1.00 46.27	O
	ATOM	5998	OWO	WAT	W	718	104.443	39.753	38.813	1.00 42.75	O
	ATOM	5999	OWO	WAT	W	719	-17.659	30.340	10.016	1.00 43.92	O
55	ATOM	6000	OWO	WAT	W	720	6.527	18.002	41.115	1.00 42.96	O
	ATOM	6001	OWO	WAT	W	721	30.110	25.949	22.723	1.00 42.22	O
	ATOM	6002	OWO	WAT	W	722	99.530	57.121	58.921	1.00 48.78	O
	ATOM	6003	OWO	WAT	W	723	95.666	32.931	39.005	1.00 41.93	O
	ATOM	6004	OWO	WAT	W	724	22.447	13.992	32.352	1.00 36.73	O

	ATOM	6005	OWO	WAT	W	725	-12.304	5.241	21.205	1.00	42.82	O
	ATOM	6006	OWO	WAT	W	726	31.924	25.055	26.803	1.00	43.20	O
	ATOM	6007	OWO	WAT	W	727	18.724	23.829	42.625	1.00	38.81	O
	ATOM	6008	OWO	WAT	W	728	-15.918	22.825	4.228	1.00	42.40	O
5	ATOM	6009	OWO	WAT	W	729	29.725	32.703	23.905	1.00	41.71	O
	ATOM	6010	OWO	WAT	W	730	70.143	50.223	57.006	1.00	40.87	O
	ATOM	6011	OWO	WAT	W	731	20.042	34.462	8.889	1.00	42.39	O
	ATOM	6012	OWO	WAT	W	732	101.912	41.183	29.473	1.00	44.98	O
	ATOM	6013	OWO	WAT	W	733	70.685	57.140	59.173	1.00	45.13	O
10	ATOM	6014	OWO	WAT	W	734	31.199	27.580	14.855	1.00	42.48	O
	ATOM	6015	OWO	WAT	W	735	-8.718	8.222	9.842	1.00	38.68	O
	ATOM	6016	OWO	WAT	W	736	20.384	26.278	40.423	1.00	47.84	O
	ATOM	6017	OWO	WAT	W	737	78.929	66.905	45.969	1.00	40.33	O
	ATOM	6018	OWO	WAT	W	738	72.878	40.783	38.029	1.00	37.88	O
15	ATOM	6019	OWO	WAT	W	739	-17.127	11.555	34.870	1.00	45.57	O
	ATOM	6020	OWO	WAT	W	740	72.198	61.923	33.145	1.00	38.23	O
	ATOM	6021	OWO	WAT	W	741	74.361	48.471	69.557	1.00	46.46	O
	ATOM	6022	OWO	WAT	W	742	70.838	21.961	53.843	1.00	38.46	O
	ATOM	6023	OWO	WAT	W	743	71.920	73.260	47.796	1.00	34.51	O
20	ATOM	6024	OWO	WAT	W	744	-6.649	30.436	43.185	1.00	41.17	O
	ATOM	6025	OWO	WAT	W	745	12.073	41.176	33.835	1.00	37.25	O
	ATOM	6026	OWO	WAT	W	746	3.772	39.827	28.311	1.00	37.06	O
	ATOM	6027	OWO	WAT	W	747	83.695	22.688	57.551	1.00	44.64	O
	ATOM	6028	OWO	WAT	W	748	78.868	70.209	60.269	1.00	41.47	O
25	ATOM	6029	OWO	WAT	W	749	2.681	11.135	29.107	1.00	45.78	O
	ATOM	6030	OWO	WAT	W	750	-3.851	36.672	12.548	1.00	37.71	O
	ATOM	6031	OWO	WAT	W	751	-5.580	38.158	34.749	1.00	41.72	O
	ATOM	6032	OWO	WAT	W	752	-12.061	14.443	-4.143	1.00	44.23	O
	ATOM	6033	OWO	WAT	W	753	74.848	71.019	57.494	1.00	39.65	O
30	ATOM	6034	OWO	WAT	W	754	30.226	11.993	24.909	1.00	39.53	O
	ATOM	6035	OWO	WAT	W	755	93.979	60.877	42.464	1.00	42.70	O
	ATOM	6036	OWO	WAT	W	756	100.237	56.962	53.576	1.00	47.39	O
	ATOM	6037	OWO	WAT	W	757	-13.131	14.248	-6.671	1.00	46.71	O
	ATOM	6038	OWO	WAT	W	758	108.902	46.661	31.726	1.00	39.82	O
35	ATOM	6039	OWO	WAT	W	759	12.306	29.385	6.036	1.00	39.68	O
	ATOM	6040	OWO	WAT	W	760	-4.770	13.938	-5.501	1.00	42.83	O
	ATOM	6041	OWO	WAT	W	761	71.964	54.065	57.950	1.00	55.02	O
	ATOM	6042	OWO	WAT	W	762	69.804	56.288	28.236	1.00	51.12	O
	ATOM	6043	OWO	WAT	W	763	72.043	64.834	22.297	1.00	38.68	O
40	ATOM	6044	OWO	WAT	W	764	69.376	47.883	61.076	1.00	40.50	O
	ATOM	6045	OWO	WAT	W	765	-10.414	39.373	22.827	1.00	49.80	O
	ATOM	6046	OWO	WAT	W	766	71.511	56.324	65.919	1.00	48.05	O
	ATOM	6047	OWO	WAT	W	767	76.124	53.448	72.761	1.00	37.85	O
	ATOM	6048	OWO	WAT	W	768	10.346	15.094	16.176	1.00	45.99	O
45	ATOM	6049	OWO	WAT	W	769	15.803	34.194	3.861	1.00	49.50	O
	ATOM	6050	OWO	WAT	W	770	-17.712	26.632	-2.259	1.00	45.78	O
	ATOM	6051	OWO	WAT	W	771	-2.116	9.781	29.937	1.00	45.05	O
	ATOM	6052	OWO	WAT	W	772	6.585	5.057	17.549	1.00	50.86	O
	ATOM	6053	OWO	WAT	W	773	0.254	30.093	-3.787	1.00	50.11	O
50	ATOM	6054	OWO	WAT	W	774	4.530	14.340	42.939	1.00	51.12	O
	ATOM	6055	OWO	WAT	W	775	86.938	69.887	53.752	1.00	49.90	O
	ATOM	6056	OWO	WAT	W	776	67.819	39.098	38.776	1.00	44.79	O
	ATOM	6057	OWO	WAT	W	777	92.894	39.175	30.950	1.00	47.99	O
	ATOM	6058	OWO	WAT	W	778	-11.615	37.194	25.543	1.00	45.92	O
55	ATOM	6059	OWO	WAT	W	779	13.548	43.187	32.985	1.00	48.99	O
	ATOM	6060	OWO	WAT	W	780	-9.029	36.912	6.899	1.00	45.44	O
	ATOM	6061	OWO	WAT	W	781	8.228	34.312	40.323	1.00	49.13	O
	ATOM	6062	OWO	WAT	W	782	-7.639	39.531	26.233	1.00	42.83	O
	ATOM	6063	OWO	WAT	W	783	103.282	53.320	41.696	1.00	39.23	O

	ATOM	6064	OWO	WAT	W	784	79.849	68.198	63.615	1.00 49.76	O
	ATOM	6065	OWO	WAT	W	785	10.806	46.703	30.027	1.00 48.50	O
	ATOM	6066	OWO	WAT	W	786	10.278	28.104	2.256	1.00 45.08	O
	ATOM	6067	OWO	WAT	W	787	-12.731	22.003	19.395	1.00 50.84	O
5	ATOM	6068	OWO	WAT	W	788	11.556	51.442	15.949	1.00 55.13	O
	ATOM	6069	OWO	WAT	W	789	18.137	17.684	15.574	1.00 54.06	O
	ATOM	6070	OWO	WAT	W	790	16.007	38.138	37.419	1.00 37.69	O
	ATOM	6071	OWO	WAT	W	791	107.269	39.366	40.596	1.00 42.10	O
	ATOM	6072	OWO	WAT	W	792	92.138	28.005	42.151	1.00 47.51	O
10	ATOM	6073	OWO	WAT	W	793	-15.958	20.134	34.862	1.00 50.35	O
	ATOM	6074	OWO	WAT	W	794	105.554	44.211	46.382	1.00 43.27	O
	ATOM	6075	OWO	WAT	W	795	70.984	24.764	48.554	1.00 45.16	O
	ATOM	6076	OWO	WAT	W	796	-0.589	11.408	28.727	1.00 55.93	O
	ATOM	6077	OWO	WAT	W	797	-8.325	13.863	0.933	1.00 37.99	O
15	ATOM	6078	OWO	WAT	W	798	-13.851	31.784	20.354	1.00 39.81	O
	ATOM	6079	OWO	WAT	W	799	77.983	26.725	66.736	1.00 42.60	O
	ATOM	6080	OWO	WAT	W	800	-12.394	7.735	25.189	1.00 50.65	O
	ATOM	6081	OWO	WAT	W	801	86.791	30.618	34.057	1.00 41.19	O
	ATOM	6082	OWO	WAT	W	802	10.740	12.887	19.762	1.00 34.20	O
20	ATOM	6083	OWO	WAT	W	803	4.597	12.434	38.677	1.00 44.86	O
	ATOM	6084	OWO	WAT	W	804	65.489	50.372	52.067	1.00 45.48	O
	ATOM	6085	OWO	WAT	W	805	75.557	75.724	47.677	1.00 44.91	O
	ATOM	6086	OWO	WAT	W	806	99.252	56.498	61.878	1.00 45.48	O
	ATOM	6087	OWO	WAT	W	807	22.230	33.247	12.252	1.00 45.16	O
25	ATOM	6088	OWO	WAT	W	808	4.275	5.280	18.625	1.00 50.93	O
	ATOM	6089	OWO	WAT	W	809	-2.790	38.549	3.137	1.00 48.40	O
	ATOM	6090	OWO	WAT	W	810	82.611	31.253	67.441	1.00 55.10	O
	ATOM	6091	OWO	WAT	W	811	60.665	49.734	46.321	1.00 40.99	O
	ATOM	6092	OWO	WAT	W	812	3.154	9.852	31.212	1.00 51.47	O
30	ATOM	6093	OWO	WAT	W	813	2.709	29.749	-1.904	1.00 43.68	O
	ATOM	6094	OWO	WAT	W	814	-1.134	36.876	4.079	1.00 42.69	O
	ATOM	6095	OWO	WAT	W	815	67.768	52.395	54.902	1.00 47.66	O
	ATOM	6096	OWO	WAT	W	816	64.711	32.171	65.883	1.00 37.49	O
	ATOM	6097	OWO	WAT	W	817	75.140	18.625	52.961	1.00 43.29	O
35	ATOM	6098	OWO	WAT	W	818	13.727	35.581	3.827	1.00 35.43	O
	ATOM	6099	OWO	WAT	W	819	107.138	47.462	48.743	1.00 47.50	O
	ATOM	6100	OWO	WAT	W	820	0.890	13.799	43.411	1.00 70.20	O
	ATOM	6101	OWO	WAT	W	821	-17.909	22.541	28.674	1.00 45.25	O
	ATOM	6102	OWO	WAT	W	822	62.987	48.439	32.191	1.00 49.64	O
40	ATOM	6103	OWO	WAT	W	823	19.134	36.015	6.954	1.00 47.91	O
	ATOM	6104	OWO	WAT	W	824	95.386	52.724	38.315	1.00 39.06	O
	ATOM	6105	OWO	WAT	W	825	-4.894	43.275	26.604	1.00 38.70	O
	ATOM	6106	OWO	WAT	W	826	70.867	34.003	44.766	1.00 37.40	O
	ATOM	6107	OWO	WAT	W	827	73.436	69.331	51.280	1.00 49.45	O
45	ATOM	6108	OWO	WAT	W	828	86.534	44.038	26.647	1.00 35.57	O
	ATOM	6109	OWO	WAT	W	829	70.185	51.742	58.933	1.00 48.32	O
	ATOM	6110	OWO	WAT	W	830	80.291	69.174	49.279	1.00 52.56	O
	ATOM	6111	OWO	WAT	W	831	70.714	71.457	45.425	1.00 37.69	O
	ATOM	6112	OWO	WAT	W	832	71.705	69.101	39.220	1.00 49.67	O
50	ATOM	6113	OWO	WAT	W	833	3.992	22.633	-2.782	1.00 51.36	O
	ATOM	6114	OWO	WAT	W	834	67.983	57.801	57.503	1.00 40.80	O
	ATOM	6115	OWO	WAT	W	835	80.669	39.481	72.617	1.00 48.51	O
	ATOM	6116	OWO	WAT	W	836	68.686	48.728	55.013	1.00 55.84	O
	ATOM	6117	OWO	WAT	W	837	12.458	16.480	15.148	1.00 40.89	O
55	ATOM	6118	OWO	WAT	W	838	90.722	65.542	49.220	1.00 50.70	O
	ATOM	6119	OWO	WAT	W	839	75.060	21.496	58.444	1.00 56.11	O
	ATOM	6120	OWO	WAT	W	840	103.112	46.836	52.279	1.00 37.29	O
	ATOM	6121	OWO	WAT	W	841	5.629	13.125	21.912	1.00 48.36	O
	ATOM	6122	OWO	WAT	W	842	3.750	2.529	14.238	1.00 35.83	O

	ATOM	6123	OWO	WAT	W	843	96.158	41.458	31.534	1.00 48.18	O
	ATOM	6124	OWO	WAT	W	844	86.258	43.077	73.686	1.00 42.52	O
	ATOM	6125	OWO	WAT	W	845	84.232	44.670	73.912	1.00 45.77	O
	ATOM	6126	OWO	WAT	W	846	8.098	41.074	31.261	1.00 48.80	O
5	ATOM	6127	OWO	WAT	W	847	20.738	14.720	16.149	1.00 39.73	O
	ATOM	6128	OWO	WAT	W	848	-2.346	44.407	25.480	1.00 49.90	O
	ATOM	6129	OWO	WAT	W	849	-15.526	22.362	-6.197	1.00 44.31	O
	ATOM	6130	OWO	WAT	W	850	89.590	64.098	46.869	1.00 56.09	O
	ATOM	6131	OWO	WAT	W	851	-3.449	43.486	5.353	1.00 41.49	O
10	ATOM	6132	OWO	WAT	W	852	68.901	52.226	68.217	1.00 44.27	O
	ATOM	6133	OWO	WAT	W	853	98.320	50.981	30.117	1.00 46.85	O
	ATOM	6134	OWO	WAT	W	854	70.073	58.300	64.610	1.00 44.99	O
	ATOM	6135	OWO	WAT	W	855	4.624	47.036	1.440	1.00 42.81	O
	ATOM	6136	OWO	WAT	W	856	87.815	67.533	49.547	1.00 48.12	O
15	ATOM	6137	OWO	WAT	W	857	6.013	5.658	20.716	1.00 45.71	O
	ATOM	6138	OWO	WAT	W	858	83.044	64.897	47.940	1.00 44.88	O
	ATOM	6139	OWO	WAT	W	859	-4.280	42.843	9.627	1.00 47.04	O
	ATOM	6140	OWO	WAT	W	860	97.665	48.641	62.942	1.00 47.67	O
	ATOM	6141	OWO	WAT	W	861	85.390	70.389	57.138	1.00 39.39	O
20	ATOM	6142	OWO	WAT	W	862	-24.321	19.975	24.770	1.00 55.66	O
	ATOM	6143	OWO	WAT	W	863	106.910	40.893	42.688	1.00 46.05	O
	ATOM	6144	OWO	WAT	W	864	23.971	35.886	30.562	1.00 50.30	O
	ATOM	6145	OWO	WAT	W	865	88.613	34.316	71.466	1.00 52.11	O
	ATOM	6146	OWO	WAT	W	866	78.329	44.285	72.155	1.00 47.56	O
25	ATOM	6147	OWO	WAT	W	867	5.442	10.717	28.127	1.00 57.69	O
	ATOM	6148	OWO	WAT	W	868	4.909	23.695	-5.622	1.00 40.14	O
	ATOM	6149	OWO	WAT	W	869	61.766	54.883	42.345	1.00 56.27	O
	ATOM	6150	OWO	WAT	W	870	-15.697	18.900	-6.609	1.00 48.58	O
	ATOM	6151	OWO	WAT	W	871	-1.994	38.190	34.240	1.00 40.58	O
30	ATOM	6152	OWO	WAT	W	872	17.593	39.195	7.785	1.00 47.30	O
	ATOM	6153	OWO	WAT	W	873	-6.929	8.637	30.485	1.00 48.70	O
	ATOM	6154	OWO	WAT	W	874	-13.762	10.759	20.840	1.00 45.69	O
	ATOM	6155	OWO	WAT	W	875	106.016	45.679	51.075	1.00 52.89	O
	ATOM	6156	OWO	WAT	W	876	98.597	47.854	32.956	1.00 47.28	O
35	ATOM	6157	OWO	WAT	W	877	-19.570	20.500	21.619	1.00 59.90	O
	ATOM	6158	OWO	WAT	W	878	4.953	51.376	4.522	1.00 49.58	O
	ATOM	6159	OWO	WAT	W	879	65.082	30.981	58.030	1.00 52.58	O
	ATOM	6160	OWO	WAT	W	880	-4.570	45.999	8.945	1.00 47.97	O
	ATOM	6161	OWO	WAT	W	881	71.448	72.042	52.347	1.00 48.22	O
40	ATOM	6162	OWO	WAT	W	882	-5.192	37.121	9.739	1.00 52.84	O
	ATOM	6163	OWO	WAT	W	883	22.418	42.988	17.741	1.00 51.35	O
	ATOM	6164	OWO	WAT	W	884	1.325	32.956	0.433	1.00 51.82	O
	ATOM	6165	OWO	WAT	W	885	26.545	39.446	15.718	1.00 58.29	O
	ATOM	6166	OWO	WAT	W	886	20.591	28.184	37.538	1.00 44.12	O
45	ATOM	6167	OWO	WAT	W	887	61.327	62.516	49.641	1.00 53.61	O
	ATOM	6168	OWO	WAT	W	888	18.556	37.697	46.622	1.00 40.96	O
	ATOM	6169	OWO	WAT	W	889	67.601	59.213	44.343	1.00 55.82	O
	ATOM	6170	OWO	WAT	W	890	6.062	6.589	3.745	1.00 49.33	O
	ATOM	6171	OWO	WAT	W	891	30.616	25.513	17.869	1.00 41.76	O
50	ATOM	6172	OWO	WAT	W	892	30.863	14.820	21.717	1.00 43.84	O
	ATOM	6173	OWO	WAT	W	893	92.619	60.972	62.041	1.00 39.33	O
	ATOM	6174	OWO	WAT	W	894	106.528	35.567	45.737	1.00 45.09	O
	ATOM	6175	OWO	WAT	W	895	14.117	13.422	8.846	1.00 50.37	O
	ATOM	6176	OWO	WAT	W	896	-10.147	38.227	29.237	1.00 58.96	O
55	ATOM	6177	OWO	WAT	W	897	97.900	38.773	30.904	1.00 50.37	O
	ATOM	6178	OWO	WAT	W	898	-8.204	21.942	-12.704	1.00 59.84	O
	ATOM	6179	OWO	WAT	W	899	-10.215	8.200	32.625	1.00 53.18	O
	ATOM	6180	OWO	WAT	W	900	69.667	48.886	31.602	1.00 47.81	O
	ATOM	6181	OWO	WAT	W	901	-7.032	38.633	30.903	1.00 55.74	O

APPENDIX 2

<u>The structural coordinated of the three-dimensional structure of</u>
<u>the *Humicola insolens* Cel6A catalytic core domain</u>

The structural coordinates of the *Humicola insolens* Cel6A
catalytic core domain as determined by X-ray crystallography.
The format of the coordinates is the conventional *Brookhaven*
Protein Data Bank (PDB) format. The residue numbering follows
the sequence shown in appendix 2. Only the residues from G91 to
F450 are detected in the X-ray structure.

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ATOM      1  N   GLY A  91      9.828  21.757   9.329  1.00 27.61      N
ATOM      2  CA  GLY A  91      8.961  20.868   8.549  1.00 26.62      C
ATOM      3  C   GLY A  91      8.950  19.476   9.174  1.00 23.16      C
ATOM      4  O   GLY A  91      8.477  18.537   8.545  1.00 27.18      O
ATOM      5  N   ASN A  92      9.449  19.342  10.398  1.00 20.23      N
ATOM      6  CA  ASN A  92      9.426  18.015  11.044  1.00 18.66      C
ATOM      7  C   ASN A  92      7.990  17.624  11.337  1.00 16.69      C
ATOM      8  O   ASN A  92      7.352  18.239  12.192  1.00 13.84      O
ATOM      9  CB  ASN A  92     10.249  18.108  12.329  1.00 16.13      C
ATOM     10  CG  ASN A  92     10.331  16.807  13.101  1.00 16.07      C
ATOM     11  OD1 ASN A  92      9.705  15.808  12.762  1.00 13.45      O
ATOM     12  ND2 ASN A  92     11.109  16.810  14.174  1.00 13.31      N
ATOM     13  N   PRO A  93      7.470  16.551  10.744  1.00 15.88      N
ATOM     14  CA  PRO A  93      6.110  16.099  10.975  1.00 14.91      C
ATOM     15  C   PRO A  93      5.783  15.665  12.389  1.00 13.63      C
ATOM     16  O   PRO A  93      4.608  15.589  12.779  1.00 11.92      O
ATOM     17  CB  PRO A  93      5.925  14.918  10.014  1.00 15.68      C
ATOM     18  CG  PRO A  93      7.299  14.505   9.624  1.00 16.21      C
ATOM     19  CD  PRO A  93      8.179  15.720   9.735  1.00 14.29      C
ATOM     20  N   PHE A  94      6.803  15.345  13.194  1.00  9.81      N
ATOM     21  CA  PHE A  94      6.566  14.988  14.582  1.00 11.25      C
ATOM     22  C   PHE A  94      6.440  16.220  15.475  1.00 13.53      C
ATOM     23  O   PHE A  94      6.079  16.085  16.650  1.00 16.11      O
ATOM     24  CB  PHE A  94      7.728  14.116  15.085  1.00  8.75      C
ATOM     25  CG  PHE A  94      7.681  12.739  14.468  1.00 10.16      C
ATOM     26  CD1 PHE A  94      8.194  12.506  13.205  1.00  9.57      C
ATOM     27  CD2 PHE A  94      7.103  11.697  15.167  1.00  9.98      C
ATOM     28  CE1 PHE A  94      8.132  11.225  12.652  1.00  9.81      C
ATOM     29  CE2 PHE A  94      7.042  10.427  14.625  1.00 11.75      C
ATOM     30  CZ  PHE A  94      7.559  10.193  13.361  1.00 12.26      C
ATOM     31  N   GLU A  95      6.817  17.388  15.001  1.00 15.32      N
ATOM     32  CA  GLU A  95      6.781  18.611  15.804  1.00 16.74      C
ATOM     33  C   GLU A  95      5.392  19.219  15.808  1.00 16.65      C
ATOM     34  O   GLU A  95      4.738  19.314  14.770  1.00 13.35      O
ATOM     35  CB  GLU A  95      7.823  19.604  15.275  1.00 24.87      C
ATOM     36  CG  GLU A  95      7.847  20.963  15.949  1.00 34.84      C
ATOM     37  CD  GLU A  95      9.003  21.854  15.527  1.00 40.67      C
ATOM     38  OE1 GLU A  95      9.824  21.487  14.651  1.00 42.82      O
ATOM     39  OE2 GLU A  95      9.122  22.978  16.072  1.00 43.58      O
ATOM     40  N   GLY A  96      4.934  19.612  17.002  1.00 17.62      N
ATOM     41  CA  GLY A  96      3.664  20.312  17.128  1.00 17.15      C
ATOM     42  C   GLY A  96      2.464  19.392  17.235  1.00 17.80      C
ATOM     43  O   GLY A  96      1.321  19.849  17.105  1.00 17.14      O
ATOM     44  N   VAL A  97      2.699  18.090  17.418  1.00 15.31      N
ATOM     45  CA  VAL A  97      1.610  17.136  17.562  1.00 12.55      C
ATOM     46  C   VAL A  97      1.989  16.133  18.660  1.00 14.12      C
ATOM     47  O   VAL A  97      3.169  15.913  18.939  1.00 14.61      O
ATOM     48  CB  VAL A  97      1.317  16.325  16.282  1.00 14.51      C
ATOM     49  CG1 VAL A  97      0.777  17.184  15.144  1.00 11.76      C
ATOM     50  CG2 VAL A  97      2.565  15.577  15.794  1.00 13.66      C
ATOM     51  N   GLN A  98      0.972  15.501  19.217  1.00 11.88      N
ATOM     52  CA  GLN A  98      1.109  14.391  20.127  1.00 16.04      C
ATOM     53  C   GLN A  98      0.991  13.118  19.263  1.00 15.13      C
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	ATOM	54	O	GLN A	98	0.281	13.150	18.250	1.00	14.70	O
	ATOM	55	CB	GLN A	98	-0.026	14.324	21.147	1.00	17.18	C
	ATOM	56	CG	GLN A	98	-0.175	15.582	21.987	1.00	21.23	C
	ATOM	57	CD	GLN A	98	-1.140	15.329	23.137	1.00	21.79	C
5	ATOM	58	OE1	GLN A	98	-0.836	14.528	24.018	1.00	23.39	O
	ATOM	59	NE2	GLN A	98	-2.269	16.008	23.088	1.00	19.82	N
	ATOM	60	N	LEU A	99	1.685	12.064	19.647	1.00	13.40	N
	ATOM	61	CA	LEU A	99	1.574	10.809	18.906	1.00	12.87	C
	ATOM	62	C	LEU A	99	0.480	9.966	19.545	1.00	12.55	C
10	ATOM	63	O	LEU A	99	0.562	9.745	20.743	1.00	10.08	O
	ATOM	64	CB	LEU A	99	2.929	10.095	18.888	1.00	10.90	C
	ATOM	65	CG	LEU A	99	4.041	10.857	18.146	1.00	11.33	C
	ATOM	66	CD1	LEU A	99	5.370	10.125	18.219	1.00	10.04	C
	ATOM	67	CD2	LEU A	99	3.650	11.070	16.683	1.00	8.20	C
15	ATOM	68	N	TRP A	100	-0.481	9.486	18.775	1.00	9.83	N
	ATOM	69	CA	TRP A	100	-1.568	8.666	19.269	1.00	13.08	C
	ATOM	70	C	TRP A	100	-1.104	7.307	19.781	1.00	11.95	C
	ATOM	71	O	TRP A	100	-0.470	6.523	19.060	1.00	11.49	O
	ATOM	72	CB	TRP A	100	-2.567	8.424	18.127	1.00	12.95	C
20	ATOM	73	CG	TRP A	100	-3.757	7.579	18.460	1.00	12.82	C
	ATOM	74	CD1	TRP A	100	-4.004	6.299	18.079	1.00	12.80	C
	ATOM	75	CD2	TRP A	100	-4.887	7.984	19.253	1.00	14.62	C
	ATOM	76	NE1	TRP A	100	-5.219	5.878	18.575	1.00	12.79	N
	ATOM	77	CE2	TRP A	100	-5.775	6.896	19.302	1.00	13.02	C
25	ATOM	78	CE3	TRP A	100	-5.214	9.169	19.918	1.00	13.29	C
	ATOM	79	CZ2	TRP A	100	-6.986	6.954	19.999	1.00	15.91	C
	ATOM	80	CZ3	TRP A	100	-6.419	9.229	20.607	1.00	17.23	C
	ATOM	81	CH2	TRP A	100	-7.282	8.122	20.645	1.00	15.85	C
	ATOM	82	N	ALA A	101	-1.436	7.030	21.034	1.00	12.27	N
30	ATOM	83	CA	ALA A	101	-1.158	5.728	21.649	1.00	12.90	C
	ATOM	84	C	ALA A	101	-2.456	4.940	21.451	1.00	12.69	C
	ATOM	85	O	ALA A	101	-3.483	5.283	22.046	1.00	12.00	O
	ATOM	86	CB	ALA A	101	-0.806	5.883	23.117	1.00	13.01	C
	ATOM	87	N	ASN A	102	-2.445	3.939	20.574	1.00	12.63	N
35	ATOM	88	CA	ASN A	102	-3.655	3.221	20.224	1.00	13.57	C
	ATOM	89	C	ASN A	102	-4.229	2.289	21.272	1.00	16.03	C
	ATOM	90	O	ASN A	102	-3.592	1.764	22.182	1.00	13.63	O
	ATOM	91	CB	ASN A	102	-3.418	2.495	18.886	1.00	14.58	C
	ATOM	92	CG	ASN A	102	-2.484	1.298	19.075	1.00	14.01	C
40	ATOM	93	OD1	ASN A	102	-2.947	0.252	19.508	1.00	12.96	O
	ATOM	94	ND2	ASN A	102	-1.211	1.454	18.763	1.00	13.58	N
	ATOM	95	N	ASN A	103	-5.523	2.011	21.085	1.00	16.33	N
	ATOM	96	CA	ASN A	103	-6.301	1.175	21.976	1.00	17.82	C
	ATOM	97	C	ASN A	103	-6.027	-0.306	21.875	1.00	17.45	C
45	ATOM	98	O	ASN A	103	-6.278	-1.017	22.847	1.00	13.94	O
	ATOM	99	CB	ASN A	103	-7.803	1.460	21.751	1.00	24.29	C
	ATOM	100	CG	ASN A	103	-8.157	2.779	22.423	1.00	31.47	C
	ATOM	101	OD1	ASN A	103	-7.659	3.038	23.526	1.00	33.49	O
	ATOM	102	ND2	ASN A	103	-8.974	3.601	21.771	1.00	33.07	N
50	ATOM	103	N	TYR A	104	-5.505	-0.778	20.744	1.00	17.87	N
	ATOM	104	CA	TYR A	104	-5.194	-2.202	20.629	1.00	18.15	C
	ATOM	105	C	TYR A	104	-4.025	-2.552	21.544	1.00	15.79	C
	ATOM	106	O	TYR A	104	-4.103	-3.454	22.386	1.00	16.76	O
	ATOM	107	CB	TYR A	104	-4.931	-2.573	19.167	1.00	19.04	C
55	ATOM	108	CG	TYR A	104	-4.677	-4.053	18.973	1.00	20.66	C
	ATOM	109	CD1	TYR A	104	-5.726	-4.945	18.794	1.00	22.58	C
	ATOM	110	CD2	TYR A	104	-3.388	-4.549	18.963	1.00	21.13	C
	ATOM	111	CE1	TYR A	104	-5.493	-6.298	18.619	1.00	23.34	C
	ATOM	112	CE2	TYR A	104	-3.139	-5.900	18.785	1.00	21.04	C
60	ATOM	113	CZ	TYR A	104	-4.193	-6.764	18.626	1.00	21.38	C
	ATOM	114	OH	TYR A	104	-3.940	-8.104	18.442	1.00	20.27	O
	ATOM	115	N	TYR A	105	-2.930	-1.798	21.435	1.00	15.57	N
	ATOM	116	CA	TYR A	105	-1.762	-2.036	22.287	1.00	14.64	C
	ATOM	117	C	TYR A	105	-2.128	-1.770	23.746	1.00	13.79	C
65	ATOM	118	O	TYR A	105	-1.781	-2.574	24.612	1.00	13.07	O
	ATOM	119	CB	TYR A	105	-0.574	-1.185	21.846	1.00	12.73	C
	ATOM	120	CG	TYR A	105	0.710	-1.527	22.574	1.00	14.55	C
	ATOM	121	CD1	TYR A	105	1.532	-2.556	22.138	1.00	13.48	C
	ATOM	122	CD2	TYR A	105	1.072	-0.827	23.720	1.00	15.08	C
70	ATOM	123	CE1	TYR A	105	2.711	-2.873	22.816	1.00	10.63	C
	ATOM	124	CE2	TYR A	105	2.246	-1.125	24.390	1.00	15.04	C
	ATOM	125	CZ	TYR A	105	3.054	-2.142	23.930	1.00	14.14	C

	ATOM	126	OH	TYR	A	105	4.207	-2.457	24.634	1.00	13.84	O
	ATOM	127	N	ARG	A	106	-2.866	-0.700	24.025	1.00	12.63	N
	ATOM	128	CA	ARG	A	106	-3.316	-0.425	25.390	1.00	16.09	C
	ATOM	129	C	ARG	A	106	-4.035	-1.622	26.003	1.00	17.52	C
5	ATOM	130	O	ARG	A	106	-3.702	-2.067	27.110	1.00	16.80	O
	ATOM	131	CB	ARG	A	106	-4.249	0.797	25.424	1.00	14.23	C
	ATOM	132	CG	ARG	A	106	-4.567	1.195	26.865	1.00	19.17	C
	ATOM	133	CD	ARG	A	106	-5.415	2.445	27.013	1.00	18.85	C
	ATOM	134	NE	ARG	A	106	-4.720	3.667	26.672	1.00	18.87	N
10	ATOM	135	CZ	ARG	A	106	-4.661	4.258	25.485	1.00	23.19	C
	ATOM	136	NH1	ARG	A	106	-5.322	3.770	24.449	1.00	26.18	N
	ATOM	137	NH2	ARG	A	106	-3.929	5.358	25.327	1.00	25.10	N
	ATOM	138	N	SER	A	107	-5.012	-2.174	25.288	1.00	17.36	N
	ATOM	139	CA	SER	A	107	-5.770	-3.351	25.686	1.00	19.45	C
15	ATOM	140	C	SER	A	107	-4.936	-4.610	25.883	1.00	19.71	C
	ATOM	141	O	SER	A	107	-5.137	-5.364	26.861	1.00	16.83	O
	ATOM	142	CB	SER	A	107	-6.855	-3.647	24.633	1.00	24.20	C
	ATOM	143	OG	SER	A	107	-7.479	-4.899	24.916	1.00	30.43	O
	ATOM	144	N	GLU	A	108	-3.953	-4.830	24.999	1.00	17.17	N
20	ATOM	145	CA	GLU	A	108	-3.051	-5.962	25.193	1.00	17.05	C
	ATOM	146	C	GLU	A	108	-2.347	-5.819	26.541	1.00	16.74	C
	ATOM	147	O	GLU	A	108	-2.312	-6.777	27.306	1.00	20.10	O
	ATOM	148	CB	GLU	A	108	-1.994	-6.053	24.081	1.00	15.60	C
	ATOM	149	CG	GLU	A	108	-2.539	-6.470	22.728	1.00	15.75	C
25	ATOM	150	CD	GLU	A	108	-1.473	-6.462	21.652	1.00	17.15	C
	ATOM	151	OE1	GLU	A	108	-0.860	-5.401	21.385	1.00	16.01	O
	ATOM	152	OE2	GLU	A	108	-1.262	-7.542	21.070	1.00	16.95	O
	ATOM	153	N	VAL	A	109	-1.800	-4.653	26.881	1.00	17.55	N
	ATOM	154	CA	VAL	A	109	-1.122	-4.525	28.167	1.00	17.37	C
30	ATOM	155	C	VAL	A	109	-2.106	-4.680	29.328	1.00	18.11	C
	ATOM	156	O	VAL	A	109	-1.852	-5.452	30.262	1.00	19.67	O
	ATOM	157	CB	VAL	A	109	-0.377	-3.185	28.317	1.00	17.76	C
	ATOM	158	CG1	VAL	A	109	0.285	-3.119	29.683	1.00	17.70	C
	ATOM	159	CG2	VAL	A	109	0.660	-3.015	27.210	1.00	17.80	C
35	ATOM	160	N	HIS	A	110	-3.209	-3.932	29.316	1.00	19.28	N
	ATOM	161	CA	HIS	A	110	-4.154	-4.021	30.427	1.00	22.54	C
	ATOM	162	C	HIS	A	110	-4.804	-5.379	30.605	1.00	24.72	C
	ATOM	163	O	HIS	A	110	-4.922	-5.839	31.750	1.00	27.30	O
	ATOM	164	CB	HIS	A	110	-5.219	-2.911	30.361	1.00	21.81	C
40	ATOM	165	CG	HIS	A	110	-4.646	-1.600	30.826	1.00	25.02	C
	ATOM	166	ND1	HIS	A	110	-4.517	-1.286	32.161	1.00	25.96	N
	ATOM	167	CD2	HIS	A	110	-4.116	-0.565	30.139	1.00	23.36	C
	ATOM	168	CE1	HIS	A	110	-3.952	-0.097	32.277	1.00	27.07	C
	ATOM	169	NE2	HIS	A	110	-3.707	0.362	31.063	1.00	25.46	N
45	ATOM	170	N	THR	A	111	-5.230	-6.044	29.547	1.00	27.02	N
	ATOM	171	CA	THR	A	111	-5.941	-7.306	29.635	1.00	28.01	C
	ATOM	172	C	THR	A	111	-5.064	-8.547	29.590	1.00	29.56	C
	ATOM	173	O	THR	A	111	-5.390	-9.550	30.237	1.00	27.25	O
	ATOM	174	CB	THR	A	111	-6.979	-7.396	28.490	1.00	28.98	C
50	ATOM	175	OG1	THR	A	111	-7.849	-6.255	28.515	1.00	32.65	O
	ATOM	176	CG2	THR	A	111	-7.817	-8.654	28.631	1.00	30.57	C
	ATOM	177	N	LEU	A	112	-3.959	-8.518	28.832	1.00	27.67	N
	ATOM	178	CA	LEU	A	112	-3.106	-9.700	28.766	1.00	26.67	C
	ATOM	179	C	LEU	A	112	-1.926	-9.674	29.718	1.00	26.00	C
55	ATOM	180	O	LEU	A	112	-1.683	-10.667	30.417	1.00	27.00	O
	ATOM	181	CB	LEU	A	112	-2.640	-9.915	27.316	1.00	26.49	C
	ATOM	182	CG	LEU	A	112	-3.744	-9.881	26.262	1.00	26.08	C
	ATOM	183	CD1	LEU	A	112	-3.188	-10.032	24.850	1.00	23.69	C
	ATOM	184	CD2	LEU	A	112	-4.775	-10.977	26.535	1.00	26.41	C
60	ATOM	185	N	ALA	A	113	-1.220	-8.559	29.836	1.00	25.53	N
	ATOM	186	CA	ALA	A	113	-0.018	-8.486	30.657	1.00	24.31	C
	ATOM	187	C	ALA	A	113	-0.191	-8.212	32.139	1.00	23.97	C
	ATOM	188	O	ALA	A	113	0.260	-8.970	33.009	1.00	22.26	O
	ATOM	189	CB	ALA	A	113	0.899	-7.392	30.084	1.00	23.61	C
65	ATOM	190	N	ILE	A	114	-0.831	-7.080	32.461	1.00	22.40	N
	ATOM	191	CA	ILE	A	114	-0.940	-6.637	33.839	1.00	23.74	C
	ATOM	192	C	ILE	A	114	-1.503	-7.677	34.785	1.00	26.57	C
	ATOM	193	O	ILE	A	114	-0.851	-7.946	35.798	1.00	25.46	O
	ATOM	194	CB	ILE	A	114	-1.633	-5.278	33.976	1.00	21.40	C
70	ATOM	195	CG1	ILE	A	114	-0.711	-4.203	33.390	1.00	16.26	C
	ATOM	196	CG2	ILE	A	114	-1.961	-4.951	35.430	1.00	19.78	C
	ATOM	197	CD1	ILE	A	114	-1.313	-2.817	33.321	1.00	21.39	C

	ATOM	198	N	PRO A 115	-2.603	-8.340	34.475	1.00	30.09	N
	ATOM	199	CA	PRO A 115	-3.163	-9.372	35.330	1.00	34.92	C
	ATOM	200	C	PRO A 115	-2.175	-10.418	35.811	1.00	40.86	C
	ATOM	201	O	PRO A 115	-2.276	-10.899	36.945	1.00	41.94	O
5	ATOM	202	CB	PRO A 115	-4.255	-9.993	34.464	1.00	34.42	C
	ATOM	203	CG	PRO A 115	-4.684	-8.899	33.548	1.00	32.96	C
	ATOM	204	CD	PRO A 115	-3.440	-8.094	33.276	1.00	30.71	C
	ATOM	205	N	GLN A 116	-1.190	-10.794	35.004	1.00	45.84	N
	ATOM	206	CA	GLN A 116	-0.168	-11.761	35.330	1.00	49.55	C
10	ATOM	207	C	GLN A 116	1.065	-11.195	36.022	1.00	50.64	C
	ATOM	208	O	GLN A 116	1.982	-11.971	36.327	1.00	52.61	O
	ATOM	209	CB	GLN A 116	0.321	-12.436	34.038	1.00	53.69	C
	ATOM	210	CG	GLN A 116	-0.768	-12.787	33.044	1.00	56.00	C
	ATOM	211	CD	GLN A 116	-1.650	-13.931	33.495	1.00	59.17	C
15	ATOM	212	OE1	GLN A 116	-2.844	-13.948	33.177	1.00	60.02	O
	ATOM	213	NE2	GLN A 116	-1.079	-14.893	34.218	1.00	58.44	N
	ATOM	214	N	ILE A 117	1.153	-9.895	36.263	1.00	49.79	N
	ATOM	215	CA	ILE A 117	2.359	-9.340	36.897	1.00	48.90	C
	ATOM	216	C	ILE A 117	2.173	-9.200	38.403	1.00	48.85	C
20	ATOM	217	O	ILE A 117	1.240	-8.546	38.878	1.00	47.80	O
	ATOM	218	CB	ILE A 117	2.707	-7.969	36.257	1.00	48.99	C
	ATOM	219	CG1	ILE A 117	3.093	-8.201	34.774	1.00	49.40	C
	ATOM	220	CG2	ILE A 117	3.925	-7.366	36.972	1.00	49.20	C
	ATOM	221	CD1	ILE A 117	3.081	-6.933	33.936	1.00	49.29	C
25	ATOM	222	N	THR A 118	3.081	-9.830	39.155	1.00	46.94	N
	ATOM	223	CA	THR A 118	2.965	-9.779	40.610	1.00	45.80	C
	ATOM	224	C	THR A 118	3.655	-8.550	41.170	1.00	45.43	C
	ATOM	225	O	THR A 118	3.100	-7.895	42.047	1.00	46.96	O
	ATOM	226	CB	THR A 118	3.428	-11.069	41.317	1.00	46.82	C
30	ATOM	227	OG1	THR A 118	4.776	-11.411	41.099	1.00	46.50	O
	ATOM	228	CG2	THR A 118	2.577	-12.229	40.772	1.00	44.46	C
	ATOM	229	N	ASP A 119	4.845	-8.222	40.697	1.00	44.01	N
	ATOM	230	CA	ASP A 119	5.550	-7.055	41.219	1.00	43.17	C
	ATOM	231	C	ASP A 119	4.710	-5.802	41.052	1.00	41.01	C
35	ATOM	232	O	ASP A 119	4.392	-5.416	39.925	1.00	39.94	O
	ATOM	233	CB	ASP A 119	6.870	-6.900	40.457	1.00	46.99	C
	ATOM	234	CG	ASP A 119	7.907	-6.098	41.205	1.00	49.42	C
	ATOM	235	OD1	ASP A 119	7.579	-5.155	41.952	1.00	52.21	O
	ATOM	236	OD2	ASP A 119	9.104	-6.434	41.035	1.00	51.58	O
40	ATOM	237	N	PRO A 120	4.452	-5.090	42.142	1.00	39.04	N
	ATOM	238	CA	PRO A 120	3.724	-3.834	42.086	1.00	36.91	C
	ATOM	239	C	PRO A 120	4.446	-2.802	41.227	1.00	35.45	C
	ATOM	240	O	PRO A 120	3.810	-2.032	40.508	1.00	33.13	O
	ATOM	241	CB	PRO A 120	3.592	-3.389	43.528	1.00	37.45	C
45	ATOM	242	CG	PRO A 120	4.443	-4.278	44.352	1.00	37.57	C
	ATOM	243	CD	PRO A 120	4.841	-5.463	43.521	1.00	38.90	C
	ATOM	244	N	ALA A 121	5.770	-2.776	41.298	1.00	34.03	N
	ATOM	245	CA	ALA A 121	6.612	-1.876	40.528	1.00	32.17	C
	ATOM	246	C	ALA A 121	6.511	-2.197	39.042	1.00	29.70	C
50	ATOM	247	O	ALA A 121	6.338	-1.288	38.233	1.00	31.94	O
	ATOM	248	CB	ALA A 121	8.068	-1.972	40.969	1.00	34.01	C
	ATOM	249	N	LEU A 122	6.548	-3.480	38.683	1.00	26.92	N
	ATOM	250	CA	LEU A 122	6.351	-3.864	37.296	1.00	26.18	C
	ATOM	251	C	LEU A 122	4.944	-3.511	36.812	1.00	25.84	C
55	ATOM	252	O	LEU A 122	4.805	-3.163	35.634	1.00	21.96	O
	ATOM	253	CB	LEU A 122	6.640	-5.336	37.038	1.00	26.91	C
	ATOM	254	CG	LEU A 122	8.108	-5.769	37.001	1.00	27.40	C
	ATOM	255	CD1	LEU A 122	8.189	-7.241	36.625	1.00	29.77	C
	ATOM	256	CD2	LEU A 122	8.910	-4.923	36.020	1.00	28.91	C
60	ATOM	257	N	ARG A 123	3.923	-3.611	37.671	1.00	23.27	N
	ATOM	258	CA	ARG A 123	2.574	-3.278	37.254	1.00	23.17	C
	ATOM	259	C	ARG A 123	2.428	-1.802	36.911	1.00	22.59	C
	ATOM	260	O	ARG A 123	1.844	-1.448	35.887	1.00	21.89	O
	ATOM	261	CB	ARG A 123	1.522	-3.583	38.319	1.00	22.73	C
65	ATOM	262	CG	ARG A 123	1.114	-5.044	38.379	1.00	24.61	C
	ATOM	263	CD	ARG A 123	-0.281	-5.084	39.056	1.00	21.93	C
	ATOM	264	NE	ARG A 123	-0.674	-6.472	39.087	1.00	22.49	N
	ATOM	265	CZ	ARG A 123	-1.896	-6.959	38.970	1.00	21.33	C
	ATOM	266	NH1	ARG A 123	-2.921	-6.135	38.827	1.00	17.12	N
70	ATOM	267	NH2	ARG A 123	-1.990	-8.282	39.016	1.00	23.60	N
	ATOM	268	N	ALA A 124	2.932	-0.947	37.801	1.00	22.35	N
	ATOM	269	CA	ALA A 124	2.879	0.486	37.574	1.00	22.62	C

ATOM	270	C	ALA A 124	3.631	0.867	36.293	1.00	22.96	C
ATOM	271	O	ALA A 124	3.219	1.765	35.557	1.00	22.62	O
ATOM	272	CB	ALA A 124	3.479	1.237	38.766	1.00	25.24	C
ATOM	273	N	ALA A 125	4.744	0.194	36.020	1.00	21.29	N
5 ATOM	274	CA	ALA A 125	5.526	0.460	34.821	1.00	22.37	C
ATOM	275	C	ALA A 125	4.780	-0.052	33.594	1.00	21.22	C
ATOM	276	O	ALA A 125	4.739	0.642	32.568	1.00	20.55	O
ATOM	277	CB	ALA A 125	6.917	-0.142	34.974	1.00	21.61	C
ATOM	278	N	ALA A 126	4.072	-1.174	33.716	1.00	16.70	N
10 ATOM	279	CA	ALA A 126	3.285	-1.695	32.600	1.00	16.03	C
ATOM	280	C	ALA A 126	2.168	-0.718	32.228	1.00	16.88	C
ATOM	281	O	ALA A 126	1.894	-0.493	31.048	1.00	14.78	O
ATOM	282	CB	ALA A 126	2.685	-3.048	32.933	1.00	13.36	C
ATOM	283	N	SER A 127	1.521	-0.113	33.226	1.00	16.69	N
15 ATOM	284	CA	SER A 127	0.485	0.884	32.968	1.00	18.32	C
ATOM	285	C	SER A 127	1.084	2.042	32.171	1.00	16.53	C
ATOM	286	O	SER A 127	0.373	2.585	31.322	1.00	18.15	O
ATOM	287	CB	SER A 127	-0.188	1.369	34.261	1.00	22.44	C
ATOM	288	OG ASER A 127		-0.899	0.330	34.893	0.50	29.80	O
20 ATOM	2830	OG BSER A 127		-1.331	2.154	33.971	0.50	21.53	N
ATOM	289	N	ALA A 128	2.294	2.473	32.496	1.00	13.16	C
ATOM	290	CA	ALA A 128	2.912	3.582	31.783	1.00	12.91	C
ATOM	291	C	ALA A 128	3.262	3.233	30.340	1.00	13.03	O
ATOM	292	O	ALA A 128	3.021	4.030	29.407	1.00	12.54	C
25 ATOM	293	CB	ALA A 128	4.130	4.062	32.554	1.00	13.61	N
ATOM	294	N	VAL A 129	3.801	2.045	30.104	1.00	12.24	C
ATOM	295	CA	VAL A 129	4.162	1.543	28.787	1.00	13.46	C
ATOM	296	C	VAL A 129	2.926	1.449	27.888	1.00	15.33	O
ATOM	297	O	VAL A 129	3.004	1.619	26.673	1.00	13.42	C
30 ATOM	298	CB	VAL A 129	4.800	0.134	28.822	1.00	15.74	C
ATOM	299	CG1	VAL A 129	5.053	-0.415	27.423	1.00	21.31	C
ATOM	300	CG2	VAL A 129	6.116	0.115	29.582	1.00	20.61	N
ATOM	301	N	ALA A 130	1.756	1.188	28.469	1.00	16.19	C
ATOM	302	CA	ALA A 130	0.500	1.091	27.750	1.00	17.34	C
35 ATOM	303	C	ALA A 130	0.140	2.374	27.011	1.00	16.78	O
ATOM	304	O	ALA A 130	-0.623	2.364	26.036	1.00	19.11	C
ATOM	305	CB	ALA A 130	-0.620	0.704	28.713	1.00	14.76	N
ATOM	306	N	GLU A 131	0.616	3.509	27.490	1.00	13.17	C
ATOM	307	CA	GLU A 131	0.387	4.814	26.930	1.00	14.63	C
40 ATOM	308	C	GLU A 131	1.484	5.274	25.975	1.00	13.20	O
ATOM	309	O	GLU A 131	1.331	6.391	25.480	1.00	14.75	C
ATOM	310	CB	GLU A 131	0.214	5.864	28.047	1.00	14.20	C
ATOM	311	CG	GLU A 131	-0.804	5.390	29.101	1.00	16.67	C
ATOM	312	CD	GLU A 131	-2.191	5.251	28.492	1.00	17.68	C
45 ATOM	313	OE1	GLU A 131	-2.549	6.169	27.715	1.00	16.62	O
ATOM	314	OE2	GLU A 131	-2.890	4.265	28.795	1.00	18.66	N
ATOM	315	N	VAL A 132	2.538	4.512	25.741	1.00	11.88	C
ATOM	316	CA	VAL A 132	3.603	4.952	24.822	1.00	11.08	C
ATOM	317	C	VAL A 132	3.135	4.692	23.394	1.00	11.44	O
50 ATOM	318	O	VAL A 132	2.668	3.588	23.097	1.00	13.60	C
ATOM	319	CB	VAL A 132	4.907	4.193	25.123	1.00	11.89	C
ATOM	320	CG1	VAL A 132	6.018	4.587	24.167	1.00	8.60	C
ATOM	321	CG2	VAL A 132	5.390	4.506	26.543	1.00	10.07	N
ATOM	322	N	PRO A 133	3.122	5.711	22.555	1.00	11.44	C
55 ATOM	323	CA	PRO A 133	2.549	5.627	21.221	1.00	10.93	C
ATOM	324	C	PRO A 133	3.425	4.887	20.236	1.00	11.01	O
ATOM	325	O	PRO A 133	4.486	5.413	19.901	1.00	13.15	C
ATOM	326	CB	PRO A 133	2.382	7.091	20.847	1.00	11.30	C
ATOM	327	CG	PRO A 133	3.475	7.826	21.566	1.00	14.33	C
60 ATOM	328	CD	PRO A 133	3.628	7.078	22.871	1.00	13.04	N
ATOM	329	N	SER A 134	3.040	3.701	19.796	1.00	9.43	C
ATOM	330	CA	SER A 134	3.825	2.928	18.845	1.00	9.61	C
ATOM	331	C	SER A 134	3.095	2.858	17.506	1.00	9.08	O
ATOM	332	O	SER A 134	1.886	3.119	17.451	1.00	7.95	C
65 ATOM	333	CB	SER A 134	4.090	1.508	19.364	1.00	11.46	C
ATOM	334	OG	SER A 134	2.893	0.905	19.850	1.00	9.22	O
ATOM	335	N	PHE A 135	3.804	2.513	16.435	1.00	7.57	N
ATOM	336	CA	PHE A 135	3.157	2.391	15.122	1.00	6.79	C
ATOM	337	C	PHE A 135	2.172	1.234	15.076	1.00	7.10	C
70 ATOM	338	O	PHE A 135	2.370	0.257	15.810	1.00	6.61	O
ATOM	339	CB	PHE A 135	4.240	2.198	14.047	1.00	6.80	C
ATOM	340	CG	PHE A 135	4.901	3.451	13.541	1.00	8.54	C

	ATOM	341	CD1	PHE	A	135	5.742	4.230	14.318	1.00	7.25	C
	ATOM	342	CD2	PHE	A	135	4.669	3.849	12.227	1.00	8.57	C
	ATOM	343	CE1	PHE	A	135	6.329	5.368	13.811	1.00	6.65	C
	ATOM	344	CE2	PHE	A	135	5.247	4.983	11.706	1.00	7.30	C
5	ATOM	345	CZ	PHE	A	135	6.079	5.765	12.505	1.00	8.25	C
	ATOM	346	N	GLN	A	136	1.200	1.181	14.163	1.00	8.59	N
	ATOM	347	CA	GLN	A	136	0.314	0.072	13.882	1.00	7.41	C
	ATOM	348	C	GLN	A	136	0.533	-0.390	12.449	1.00	8.09	C
	ATOM	349	O	GLN	A	136	0.975	0.452	11.680	1.00	9.99	O
10	ATOM	350	CB	GLN	A	136	-1.133	0.533	14.041	1.00	8.77	C
	ATOM	351	CG	GLN	A	136	-1.414	0.850	15.526	1.00	8.45	C
	ATOM	352	CD	GLN	A	136	-2.881	1.260	15.641	1.00	9.06	C
	ATOM	353	OE1	GLN	A	136	-3.276	2.356	15.230	1.00	13.11	O
	ATOM	354	NE2	GLN	A	136	-3.625	0.336	16.178	1.00	10.30	N
15	ATOM	355	N	TRP	A	137	0.466	-1.677	12.180	1.00	8.68	N
	ATOM	356	CA	TRP	A	137	0.915	-2.150	10.884	1.00	8.62	C
	ATOM	357	C	TRP	A	137	-0.191	-2.564	9.948	1.00	7.64	C
	ATOM	358	O	TRP	A	137	-1.013	-3.398	10.316	1.00	8.36	O
	ATOM	359	CB	TRP	A	137	1.824	-3.349	11.237	1.00	7.40	C
20	ATOM	360	CG	TRP	A	137	3.105	-2.973	11.930	1.00	9.26	C
	ATOM	361	CD1	TRP	A	137	3.286	-2.305	13.106	1.00	9.31	C
	ATOM	362	CD2	TRP	A	137	4.420	-3.292	11.476	1.00	6.21	C
	ATOM	363	NE1	TRP	A	137	4.621	-2.162	13.414	1.00	8.45	N
	ATOM	364	CE2	TRP	A	137	5.335	-2.772	12.426	1.00	8.77	C
25	ATOM	365	CE3	TRP	A	137	4.916	-3.979	10.357	1.00	10.04	C
	ATOM	366	CZ2	TRP	A	137	6.720	-2.902	12.307	1.00	8.70	C
	ATOM	367	CZ3	TRP	A	137	6.302	-4.097	10.235	1.00	8.51	C
	ATOM	368	CH2	TRP	A	137	7.161	-3.571	11.205	1.00	7.62	C
	ATOM	369	N	LEU	A	138	-0.086	-2.138	8.689	1.00	6.71	N
30	ATOM	370	CA	LEU	A	138	-1.011	-2.672	7.669	1.00	7.17	C
	ATOM	371	C	LEU	A	138	-0.235	-3.793	6.979	1.00	6.99	C
	ATOM	372	O	LEU	A	138	0.173	-3.705	5.828	1.00	6.77	O
	ATOM	373	CB	LEU	A	138	-1.459	-1.602	6.685	1.00	8.93	C
	ATOM	374	CG	LEU	A	138	-1.894	-0.268	7.300	1.00	6.21	C
35	ATOM	375	CD1	LEU	A	138	-2.279	0.680	6.146	1.00	6.42	C
	ATOM	376	CD2	LEU	A	138	-3.057	-0.459	8.260	1.00	8.15	C
	ATOM	377	N	ASP	A	139	-0.070	-4.895	7.720	1.00	7.95	N
	ATOM	378	CA	ASP	A	139	0.735	-6.017	7.251	1.00	8.19	C
	ATOM	379	C	ASP	A	139	-0.084	-7.090	6.568	1.00	8.76	C
40	ATOM	380	O	ASP	A	139	0.469	-8.089	6.083	1.00	7.32	O
	ATOM	381	CB	ASP	A	139	1.524	-6.582	8.447	1.00	12.08	C
	ATOM	382	CG	ASP	A	139	0.609	-7.212	9.478	1.00	14.55	C
	ATOM	383	OD1	ASP	A	139	-0.510	-6.736	9.703	1.00	14.60	O
	ATOM	384	OD2	ASP	A	139	1.032	-8.226	10.067	1.00	22.92	O
45	ATOM	385	N	ARG	A	140	-1.393	-6.858	6.496	1.00	6.66	N
	ATOM	386	CA	ARG	A	140	-2.339	-7.713	5.806	1.00	8.02	C
	ATOM	387	C	ARG	A	140	-3.390	-6.789	5.177	1.00	8.44	C
	ATOM	388	O	ARG	A	140	-3.736	-5.759	5.755	1.00	10.03	O
	ATOM	389	CB	ARG	A	140	-3.085	-8.676	6.727	1.00	14.54	C
50	ATOM	390	CG	ARG	A	140	-2.369	-9.962	7.108	1.00	21.01	C
	ATOM	391	CD	ARG	A	140	-2.810	-10.380	8.518	1.00	26.38	C
	ATOM	392	NE	ARG	A	140	-2.423	-9.344	9.477	1.00	25.95	N
	ATOM	393	CZ	ARG	A	140	-3.224	-8.786	10.378	1.00	27.50	C
	ATOM	394	NH1	ARG	A	140	-4.503	-9.156	10.464	1.00	24.37	N
55	ATOM	395	NH2	ARG	A	140	-2.714	-7.848	11.169	1.00	26.06	N
	ATOM	396	N	ASN	A	141	-3.891	-7.143	4.011	1.00	7.01	N
	ATOM	397	CA	ASN	A	141	-4.890	-6.359	3.301	1.00	7.11	C
	ATOM	398	C	ASN	A	141	-6.119	-6.052	4.142	1.00	7.69	C
	ATOM	399	O	ASN	A	141	-6.718	-4.960	4.039	1.00	5.66	O
60	ATOM	400	CB	ASN	A	141	-5.253	-7.072	1.984	1.00	8.96	C
	ATOM	401	CG	ASN	A	141	-6.154	-6.226	1.085	1.00	10.45	C
	ATOM	402	OD1	ASN	A	141	-5.846	-5.034	0.880	1.00	7.27	O
	ATOM	403	ND2	ASN	A	141	-7.223	-6.834	0.569	1.00	8.87	N
	ATOM	404	N	VAL	A	142	-6.547	-6.985	4.989	1.00	7.41	N
65	ATOM	405	CA	VAL	A	142	-7.727	-6.810	5.832	1.00	9.96	C
	ATOM	406	C	VAL	A	142	-7.616	-5.666	6.818	1.00	8.09	C
	ATOM	407	O	VAL	A	142	-8.642	-5.128	7.251	1.00	9.90	O
	ATOM	408	CB	VAL	A	142	-8.057	-8.122	6.577	1.00	12.41	C
	ATOM	409	CG1	VAL	A	142	-7.037	-8.366	7.688	1.00	14.72	C
70	ATOM	410	CG2	VAL	A	142	-9.473	-8.091	7.129	1.00	15.00	C
	ATOM	411	N	THR	A	143	-6.408	-5.206	7.181	1.00	8.26	N
	ATOM	412	CA	THR	A	143	-6.245	-4.077	8.090	1.00	7.37	C

	ATOM	413	C	THR A 143	-6.655	-2.742	7.471	1.00	8.31	C
	ATOM	414	O	THR A 143	-6.899	-1.791	8.214	1.00	8.19	O
	ATOM	415	CB	THR A 143	-4.765	-3.917	8.541	1.00	7.79	C
	ATOM	416	OG1	THR A 143	-3.960	-3.639	7.385	1.00	8.04	O
5	ATOM	417	CG2	THR A 143	-4.277	-5.213	9.187	1.00	7.60	C
	ATOM	418	N	VAL A 144	-6.684	-2.611	6.143	1.00	8.65	N
	ATOM	419	CA	VAL A 144	-6.965	-1.313	5.511	1.00	7.32	C
	ATOM	420	C	VAL A 144	-8.367	-0.798	5.834	1.00	8.88	C
	ATOM	421	O	VAL A 144	-8.533	0.335	6.267	1.00	8.24	O
10	ATOM	422	CB	VAL A 144	-6.764	-1.432	3.995	1.00	5.69	C
	ATOM	423	CG1	VAL A 144	-7.176	-0.172	3.234	1.00	6.76	C
	ATOM	424	CG2	VAL A 144	-5.299	-1.737	3.659	1.00	6.96	C
	ATOM	425	N	ASP A 145	-9.415	-1.614	5.663	1.00	7.58	N
	ATOM	426	CA	ASP A 145	-10.790	-1.172	5.925	1.00	8.56	C
15	ATOM	427	C	ASP A 145	-11.217	-1.428	7.358	1.00	8.48	C
	ATOM	428	O	ASP A 145	-12.375	-1.268	7.765	1.00	8.12	O
	ATOM	429	CB	ASP A 145	-11.768	-1.844	4.961	1.00	10.52	C
	ATOM	430	CG	ASP A 145	-11.807	-1.217	3.589	1.00	12.26	C
	ATOM	431	OD1	ASP A 145	-11.524	-0.004	3.452	1.00	11.52	O
20	ATOM	432	OD2	ASP A 145	-12.185	-1.921	2.626	1.00	13.96	O
	ATOM	433	N	THR A 146	-10.255	-1.842	8.199	1.00	9.54	N
	ATOM	434	CA	THR A 146	-10.525	-2.084	9.611	1.00	7.82	C
	ATOM	435	C	THR A 146	-9.638	-1.204	10.486	1.00	8.67	C
	ATOM	436	O	THR A 146	-9.993	-0.061	10.796	1.00	8.39	O
25	ATOM	437	CB	THR A 146	-10.395	-3.571	9.973	1.00	9.97	C
	ATOM	438	OG1	THR A 146	-9.098	-4.103	9.642	1.00	8.75	O
	ATOM	439	CG2	THR A 146	-11.420	-4.412	9.206	1.00	8.34	C
	ATOM	440	N	LEU A 147	-8.471	-1.689	10.890	1.00	8.40	N
	ATOM	441	CA	LEU A 147	-7.542	-0.952	11.737	1.00	10.01	C
30	ATOM	442	C	LEU A 147	-7.281	0.470	11.267	1.00	10.27	C
	ATOM	443	O	LEU A 147	-7.281	1.392	12.076	1.00	8.52	O
	ATOM	444	CB	LEU A 147	-6.213	-1.720	11.744	1.00	13.76	C
	ATOM	445	CG	LEU A 147	-5.066	-1.285	12.639	1.00	16.03	C
	ATOM	446	CD1	LEU A 147	-3.972	-2.369	12.648	1.00	18.03	C
35	ATOM	447	CD2	LEU A 147	-4.415	0.014	12.171	1.00	18.36	C
	ATOM	448	N	LEU A 148	-6.956	0.639	9.973	1.00	10.54	N
	ATOM	449	CA	LEU A 148	-6.619	1.984	9.504	1.00	9.28	C
	ATOM	450	C	LEU A 148	-7.794	2.923	9.769	1.00	7.49	C
	ATOM	451	O	LEU A 148	-7.589	3.995	10.327	1.00	8.53	O
40	ATOM	452	CB	LEU A 148	-6.228	1.992	8.026	1.00	8.01	C
	ATOM	453	CG	LEU A 148	-5.819	3.358	7.451	1.00	7.92	C
	ATOM	454	CD1	LEU A 148	-4.615	3.958	8.156	1.00	7.68	C
	ATOM	455	CD2	LEU A 148	-5.536	3.247	5.956	1.00	7.20	C
	ATOM	456	N	VAL A 149	-8.988	2.562	9.318	1.00	5.78	N
45	ATOM	457	CA	VAL A 149	-10.167	3.430	9.467	1.00	7.27	C
	ATOM	458	C	VAL A 149	-10.478	3.688	10.936	1.00	8.10	C
	ATOM	459	O	VAL A 149	-10.764	4.808	11.362	1.00	10.37	O
	ATOM	460	CB	VAL A 149	-11.381	2.848	8.730	1.00	4.23	C
	ATOM	461	CG1	VAL A 149	-12.663	3.648	8.960	1.00	7.29	C
50	ATOM	462	CG2	VAL A 149	-11.103	2.833	7.218	1.00	5.93	C
	ATOM	463	N	GLN A 150	-10.410	2.628	11.739	1.00	8.03	N
	ATOM	464	CA	GLN A 150	-10.681	2.741	13.164	1.00	9.11	C
	ATOM	465	C	GLN A 150	-9.678	3.677	13.823	1.00	8.39	C
	ATOM	466	O	GLN A 150	-10.097	4.550	14.580	1.00	9.35	O
55	ATOM	467	CB	GLN A 150	-10.642	1.352	13.817	1.00	14.96	C
	ATOM	468	CG	GLN A 150	-11.105	1.462	15.267	1.00	22.14	C
	ATOM	469	CD	GLN A 150	-11.602	0.156	15.841	1.00	25.50	C
	ATOM	470	OE1	GLN A 150	-11.083	-0.910	15.519	1.00	28.18	O
	ATOM	471	NE2	GLN A 150	-12.615	0.244	16.702	1.00	29.84	N
60	ATOM	472	N	THR A 151	-8.378	3.521	13.556	1.00	8.05	N
	ATOM	473	CA	THR A 151	-7.400	4.440	14.162	1.00	7.96	C
	ATOM	474	C	THR A 151	-7.647	5.894	13.798	1.00	8.35	C
	ATOM	475	O	THR A 151	-7.720	6.772	14.661	1.00	8.22	O
	ATOM	476	CB	THR A 151	-5.968	4.021	13.785	1.00	11.32	C
65	ATOM	477	OG1	THR A 151	-5.756	2.735	14.387	1.00	11.96	O
	ATOM	478	CG2	THR A 151	-4.924	5.009	14.282	1.00	9.34	C
	ATOM	479	N	LEU A 152	-7.832	6.168	12.504	1.00	8.14	N
	ATOM	480	CA	LEU A 152	-8.041	7.551	12.051	1.00	7.29	C
	ATOM	481	C	LEU A 152	-9.347	8.115	12.612	1.00	9.17	C
70	ATOM	482	O	LEU A 152	-9.432	9.297	12.977	1.00	8.29	O
	ATOM	483	CB	LEU A 152	-7.959	7.571	10.528	1.00	6.78	C
	ATOM	484	CG	LEU A 152	-6.569	7.205	9.945	1.00	6.61	C

	ATOM	485	CD1	LEU A 152	-6.681	7.078	8.430	1.00	5.51	C
	ATOM	486	CD2	LEU A 152	-5.516	8.245	10.319	1.00	7.04	C
	ATOM	487	N	SER A 153	-10.373	7.285	12.706	1.00	7.28	N
	ATOM	488	CA	SER A 153	-11.652	7.727	13.278	1.00	11.14	C
5	ATOM	489	C	SER A 153	-11.444	8.099	14.745	1.00	10.95	C
	ATOM	490	O	SER A 153	-11.930	9.127	15.225	1.00	11.85	O
	ATOM	491	CB	SER A 153	-12.692	6.604	13.137	1.00	7.29	C
	ATOM	492	OG A	SER A 153	-12.965	6.370	11.762	0.50	6.72	O
	ATOM	493	OG B	SER A 153	-13.872	6.992	13.815	0.50	12.37	O
10	ATOM	494	N	GLU A 154	-10.730	7.252	15.499	1.00	12.45	N
	ATOM	495	CA	GLU A 154	-10.492	7.518	16.924	1.00	13.47	C
	ATOM	496	C	GLU A 154	-9.680	8.783	17.155	1.00	12.90	C
	ATOM	497	O	GLU A 154	-9.967	9.552	18.076	1.00	12.37	O
	ATOM	498	CB	GLU A 154	-9.833	6.309	17.615	1.00	12.58	C
15	ATOM	499	CG	GLU A 154	-10.822	5.161	17.779	1.00	14.64	C
	ATOM	500	CD	GLU A 154	-10.314	3.936	18.499	1.00	20.19	C
	ATOM	501	OE1	GLU A 154	-9.272	3.982	19.194	1.00	21.91	O
	ATOM	502	OE2	GLU A 154	-10.963	2.868	18.411	1.00	19.21	O
	ATOM	503	N	ILE A 155	-8.666	9.039	16.336	1.00	10.49	N
20	ATOM	504	CA	ILE A 155	-7.852	10.237	16.439	1.00	9.77	C
	ATOM	505	C	ILE A 155	-8.686	11.472	16.092	1.00	10.81	C
	ATOM	506	O	ILE A 155	-8.660	12.463	16.812	1.00	10.95	O
	ATOM	507	CB	ILE A 155	-6.633	10.141	15.490	1.00	11.73	C
	ATOM	508	CG1	ILE A 155	-5.740	9.000	15.991	1.00	10.67	C
25	ATOM	509	CG2	ILE A 155	-5.898	11.473	15.427	1.00	9.54	C
	ATOM	510	CD1	ILE A 155	-4.548	8.672	15.106	1.00	7.45	C
	ATOM	511	N	ARG A 156	-9.513	11.399	15.052	1.00	10.62	N
	ATOM	512	CA	ARG A 156	-10.364	12.547	14.726	1.00	12.10	C
	ATOM	513	C	ARG A 156	-11.260	12.931	15.905	1.00	12.02	C
30	ATOM	514	O	ARG A 156	-11.376	14.120	16.227	1.00	11.35	O
	ATOM	515	CB	ARG A 156	-11.216	12.236	13.497	1.00	11.23	C
	ATOM	516	CG	ARG A 156	-12.289	13.283	13.233	1.00	12.89	C
	ATOM	517	CD	ARG A 156	-13.139	12.927	12.031	1.00	12.14	C
	ATOM	518	NE	ARG A 156	-12.449	13.190	10.767	1.00	11.44	N
35	ATOM	519	CZ	ARG A 156	-12.838	12.636	9.622	1.00	12.60	C
	ATOM	520	NH1	ARG A 156	-13.835	11.754	9.531	1.00	10.76	N
	ATOM	521	NH2	ARG A 156	-12.175	12.940	8.522	1.00	11.99	N
	ATOM	522	N	GLU A 157	-11.881	11.936	16.518	1.00	12.42	N
	ATOM	523	CA	GLU A 157	-12.768	12.146	17.675	1.00	16.51	C
40	ATOM	524	C	GLU A 157	-12.006	12.784	18.822	1.00	16.44	C
	ATOM	525	O	GLU A 157	-12.458	13.761	19.418	1.00	12.67	O
	ATOM	526	CB	GLU A 157	-13.386	10.799	18.005	1.00	21.63	C
	ATOM	527	CG	GLU A 157	-13.788	10.427	19.406	1.00	30.85	C
	ATOM	528	CD	GLU A 157	-14.376	9.033	19.538	1.00	35.79	C
45	ATOM	529	OE1	GLU A 157	-13.654	8.015	19.378	1.00	36.29	O
	ATOM	530	OE2	GLU A 157	-15.602	8.937	19.804	1.00	39.48	O
	ATOM	531	N	ALA A 158	-10.788	12.307	19.108	1.00	16.94	N
	ATOM	532	CA	ALA A 158	-9.981	12.868	20.193	1.00	15.78	C
	ATOM	533	C	ALA A 158	-9.602	14.304	19.878	1.00	16.51	C
50	ATOM	534	O	ALA A 158	-9.706	15.195	20.729	1.00	17.18	O
	ATOM	535	CB	ALA A 158	-8.743	12.008	20.432	1.00	16.24	C
	ATOM	536	N	ASN A 159	-9.223	14.574	18.624	1.00	14.61	N
	ATOM	537	CA	ASN A 159	-8.868	15.913	18.191	1.00	15.00	C
	ATOM	538	C	ASN A 159	-10.037	16.888	18.204	1.00	16.92	C
55	ATOM	539	O	ASN A 159	-9.907	18.044	18.647	1.00	16.12	O
	ATOM	540	CB	ASN A 159	-8.281	15.876	16.764	1.00	15.00	C
	ATOM	541	CG	ASN A 159	-6.866	15.331	16.789	1.00	14.91	C
	ATOM	542	OD1	ASN A 159	-6.283	15.148	17.875	1.00	14.98	O
	ATOM	543	ND2	ASN A 159	-6.305	15.067	15.614	1.00	8.87	N
60	ATOM	544	N	GLN A 160	-11.198	16.415	17.763	1.00	16.89	N
	ATOM	545	CA	GLN A 160	-12.403	17.252	17.753	1.00	20.76	C
	ATOM	546	C	GLN A 160	-12.877	17.542	19.172	1.00	21.81	C
	ATOM	547	O	GLN A 160	-13.481	18.590	19.413	1.00	22.79	O
	ATOM	548	CB	GLN A 160	-13.517	16.631	16.906	1.00	21.05	C
65	ATOM	549	CG	GLN A 160	-13.248	16.762	15.412	1.00	21.93	C
	ATOM	550	CD	GLN A 160	-14.287	16.101	14.534	1.00	26.67	C
	ATOM	551	OE1	GLN A 160	-15.086	15.265	14.957	1.00	28.67	O
	ATOM	552	NE2	GLN A 160	-14.277	16.430	13.245	1.00	26.21	N
	ATOM	553	N	ALA A 161	-12.542	16.686	20.128	1.00	22.26	N
70	ATOM	554	CA	ALA A 161	-12.847	16.897	21.526	1.00	24.95	C
	ATOM	555	C	ALA A 161	-11.860	17.842	22.199	1.00	26.81	C
	ATOM	556	O	ALA A 161	-12.048	18.124	23.387	1.00	29.25	O

	ATOM	557	CB	ALA	A	161	-12.910	15.578	22.289	1.00 25.97	C
	ATOM	558	N	GLY	A	162	-10.830	18.339	21.523	1.00 24.43	N
	ATOM	559	CA	GLY	A	162	-9.914	19.293	22.107	1.00 24.73	C
	ATOM	560	C	GLY	A	162	-8.499	18.847	22.403	1.00 24.28	C
5	ATOM	561	O	GLY	A	162	-7.802	19.578	23.135	1.00 21.95	O
	ATOM	562	N	ALA	A	163	-8.037	17.706	21.885	1.00 19.55	N
	ATOM	563	CA	ALA	A	163	-6.654	17.315	22.188	1.00 22.03	C
	ATOM	564	C	ALA	A	163	-5.755	18.510	21.891	1.00 22.46	C
	ATOM	565	O	ALA	A	163	-5.933	19.174	20.870	1.00 21.19	O
10	ATOM	566	CB	ALA	A	163	-6.215	16.110	21.375	1.00 23.50	C
	ATOM	567	N	ASN	A	164	-4.763	18.764	22.735	1.00 22.29	N
	ATOM	568	CA	ASN	A	164	-3.832	19.860	22.459	1.00 23.47	C
	ATOM	569	C	ASN	A	164	-2.460	19.539	23.016	1.00 21.73	C
	ATOM	570	O	ASN	A	164	-2.333	19.448	24.239	1.00 22.31	O
15	ATOM	571	CB	ASN	A	164	-4.314	21.173	23.100	1.00 28.72	C
	ATOM	572	CG	ASN	A	164	-3.286	22.273	22.897	1.00 32.01	C
	ATOM	573	OD1	ASN	A	164	-2.696	22.368	21.821	1.00 34.27	O
	ATOM	574	ND2	ASN	A	164	-3.054	23.080	23.922	1.00 34.56	N
	ATOM	575	N	PRO	A	165	-1.465	19.415	22.149	1.00 20.86	N
20	ATOM	576	CA	PRO	A	165	-1.606	19.526	20.713	1.00 19.44	C
	ATOM	577	C	PRO	A	165	-2.423	18.398	20.090	1.00 17.35	C
	ATOM	578	O	PRO	A	165	-2.698	17.420	20.779	1.00 14.86	O
	ATOM	579	CB	PRO	A	165	-0.181	19.385	20.174	1.00 20.03	C
	ATOM	580	CG	PRO	A	165	0.738	19.450	21.333	1.00 21.24	C
25	ATOM	581	CD	PRO	A	165	-0.070	19.110	22.558	1.00 22.04	C
	ATOM	582	N	GLN	A	166	-2.809	18.527	18.822	1.00 14.41	N
	ATOM	583	CA	GLN	A	166	-3.583	17.498	18.150	1.00 14.75	C
	ATOM	584	C	GLN	A	166	-2.780	16.200	18.022	1.00 12.60	C
	ATOM	585	O	GLN	A	166	-1.551	16.271	17.991	1.00 12.39	O
30	ATOM	586	CB	GLN	A	166	-3.992	17.942	16.725	1.00 18.33	C
	ATOM	587	CG	GLN	A	166	-2.869	17.964	15.707	1.00 24.17	C
	ATOM	588	CD	GLN	A	166	-3.253	18.266	14.273	1.00 26.89	C
	ATOM	589	OE1	GLN	A	166	-4.407	18.104	13.845	1.00 34.04	O
	ATOM	590	NE2	GLN	A	166	-2.281	18.693	13.472	1.00 24.83	N
35	ATOM	591	N	TYR	A	167	-3.466	15.080	17.893	1.00 10.69	N
	ATOM	592	CA	TYR	A	167	-2.810	13.784	17.726	1.00 10.57	C
	ATOM	593	C	TYR	A	167	-2.529	13.452	16.260	1.00 10.87	C
	ATOM	594	O	TYR	A	167	-3.375	13.762	15.404	1.00 9.79	O
	ATOM	595	CB	TYR	A	167	-3.726	12.671	18.254	1.00 12.05	C
40	ATOM	596	CG	TYR	A	167	-3.790	12.556	19.766	1.00 15.59	C
	ATOM	597	CD1	TYR	A	167	-2.765	11.974	20.497	1.00 19.75	C
	ATOM	598	CD2	TYR	A	167	-4.916	12.998	20.445	1.00 17.73	C
	ATOM	599	CE1	TYR	A	167	-2.839	11.856	21.879	1.00 22.74	C
	ATOM	600	CE2	TYR	A	167	-5.005	12.886	21.826	1.00 20.59	C
45	ATOM	601	CZ	TYR	A	167	-3.965	12.324	22.531	1.00 24.04	C
	ATOM	602	OH	TYR	A	167	-4.074	12.243	23.899	1.00 27.41	O
	ATOM	603	N	ALA	A	168	-1.451	12.721	16.020	1.00 9.52	N
	ATOM	604	CA	ALA	A	168	-1.092	12.256	14.689	1.00 11.13	C
	ATOM	605	C	ALA	A	168	-0.963	10.725	14.700	1.00 11.90	C
50	ATOM	606	O	ALA	A	168	-0.722	10.128	15.751	1.00 11.35	O
	ATOM	607	CB	ALA	A	168	0.221	12.842	14.200	1.00 12.45	C
	ATOM	608	N	ALA	A	169	-1.218	10.122	13.552	1.00 9.29	N
	ATOM	609	CA	ALA	A	169	-1.212	8.683	13.390	1.00 8.97	C
	ATOM	610	C	ALA	A	169	0.163	8.226	12.887	1.00 8.20	C
55	ATOM	611	O	ALA	A	169	0.842	8.962	12.163	1.00 8.12	O
	ATOM	612	CB	ALA	A	169	-2.248	8.244	12.351	1.00 9.83	C
	ATOM	613	N	GLN	A	170	0.529	7.022	13.300	1.00 6.87	N
	ATOM	614	CA	GLN	A	170	1.795	6.399	12.914	1.00 7.82	C
	ATOM	615	C	GLN	A	170	1.418	5.032	12.340	1.00 7.61	C
60	ATOM	616	O	GLN	A	170	0.853	4.194	13.040	1.00 8.51	O
	ATOM	617	CB	GLN	A	170	2.725	6.237	14.111	1.00 8.74	C
	ATOM	618	CG	GLN	A	170	3.190	7.555	14.746	1.00 9.33	C
	ATOM	619	CD	GLN	A	170	3.961	7.214	16.017	1.00 12.58	C
	ATOM	620	OE1	GLN	A	170	5.185	7.326	16.054	1.00 10.59	O
65	ATOM	621	NE2	GLN	A	170	3.199	6.777	17.011	1.00 9.26	N
	ATOM	622	N	ILE	A	171	1.645	4.834	11.048	1.00 7.15	N
	ATOM	623	CA	ILE	A	171	1.226	3.620	10.354	1.00 7.05	C
	ATOM	624	C	ILE	A	171	2.338	3.035	9.484	1.00 6.89	C
	ATOM	625	O	ILE	A	171	3.093	3.776	8.848	1.00 8.42	O
70	ATOM	626	CB	ILE	A	171	0.038	3.999	9.427	1.00 5.53	C
	ATOM	627	CG1	ILE	A	171	-1.228	4.417	10.189	1.00 5.97	C
	ATOM	628	CG2	ILE	A	171	-0.294	2.858	8.468	1.00 8.49	C

ATOM	629	CD1	ILE	A	171	-1.839	3.285	11.007	1.00	8.37	C
ATOM	630	N	VAL	A	172	2.444	1.724	9.418	1.00	6.22	N
ATOM	631	CA	VAL	A	172	3.425	1.038	8.580	1.00	6.50	C
ATOM	632	C	VAL	A	172	2.716	0.401	7.390	1.00	6.35	C
5 ATOM	633	O	VAL	A	172	1.708	-0.268	7.599	1.00	5.88	O
ATOM	634	CB	VAL	A	172	4.207	-0.059	9.340	1.00	6.33	C
ATOM	635	CG1	VAL	A	172	5.357	-0.606	8.507	1.00	6.37	C
ATOM	636	CG2	VAL	A	172	4.753	0.482	10.667	1.00	6.87	C
ATOM	637	N	VAL	A	173	3.180	0.647	6.171	1.00	6.59	N
10 ATOM	638	CA	VAL	A	173	2.676	0.020	4.957	1.00	5.00	C
ATOM	639	C	VAL	A	173	3.564	-1.211	4.727	1.00	5.91	C
ATOM	640	O	VAL	A	173	4.768	-1.025	4.523	1.00	5.01	O
ATOM	641	CB	VAL	A	173	2.726	0.999	3.774	1.00	4.06	C
ATOM	642	CG1	VAL	A	173	2.177	0.400	2.487	1.00	6.54	C
15 ATOM	643	CG2	VAL	A	173	1.871	2.218	4.174	1.00	4.80	C
ATOM	644	N	TYR	A	174	3.009	-2.416	4.842	1.00	4.19	N
ATOM	645	CA	TYR	A	174	3.867	-3.614	4.739	1.00	5.44	C
ATOM	646	C	TYR	A	174	3.151	-4.781	4.065	1.00	7.78	C
ATOM	647	O	TYR	A	174	2.787	-5.753	4.744	1.00	7.53	O
20 ATOM	648	CB	TYR	A	174	4.329	-3.976	6.152	1.00	7.25	C
ATOM	649	CG	TYR	A	174	5.310	-5.116	6.345	1.00	6.83	C
ATOM	650	CD1	TYR	A	174	6.397	-5.292	5.515	1.00	5.84	C
ATOM	651	CD2	TYR	A	174	5.140	-6.023	7.387	1.00	9.12	C
ATOM	652	CE1	TYR	A	174	7.298	-6.342	5.684	1.00	7.16	C
25 ATOM	653	CE2	TYR	A	174	6.029	-7.078	7.570	1.00	8.99	C
ATOM	654	CZ	TYR	A	174	7.098	-7.227	6.726	1.00	9.40	C
ATOM	655	OH	TYR	A	174	8.002	-8.265	6.909	1.00	9.56	O
ATOM	656	N	ASP	A	175	2.979	-4.716	2.736	1.00	7.78	N
ATOM	657	CA	ASP	A	175	2.342	-5.832	2.032	1.00	8.15	C
30 ATOM	658	C	ASP	A	175	2.855	-6.052	0.621	1.00	7.45	C
ATOM	659	O	ASP	A	175	2.092	-6.538	-0.233	1.00	5.39	O
ATOM	660	CB	ASP	A	175	0.817	-5.703	2.009	1.00	8.19	C
ATOM	661	CG	ASP	A	175	0.075	-7.027	2.027	1.00	10.97	C
ATOM	662	OD1	ASP	A	175	0.706	-8.107	2.080	1.00	7.42	O
35 ATOM	663	OD2	ASP	A	175	-1.180	-7.003	2.036	1.00	8.40	O
ATOM	664	N	LEU	A	176	4.113	-5.716	0.305	1.00	6.84	N
ATOM	665	CA	LEU	A	176	4.585	-5.961	-1.066	1.00	5.89	C
ATOM	666	C	LEU	A	176	4.435	-7.443	-1.408	1.00	6.90	C
ATOM	667	O	LEU	A	176	4.642	-8.303	-0.543	1.00	5.82	O
40 ATOM	668	CB	LEU	A	176	6.058	-5.572	-1.209	1.00	5.16	C
ATOM	669	CG	LEU	A	176	6.371	-4.071	-1.318	1.00	8.40	C
ATOM	670	CD1	LEU	A	176	7.863	-3.845	-1.163	1.00	7.00	C
ATOM	671	CD2	LEU	A	176	5.876	-3.554	-2.669	1.00	7.87	C
ATOM	672	N	PRO	A	177	4.162	-7.741	-2.668	1.00	6.19	N
45 ATOM	673	CA	PRO	A	177	4.102	-9.103	-3.168	1.00	7.49	C
ATOM	674	C	PRO	A	177	5.488	-9.712	-3.184	1.00	8.85	C
ATOM	675	O	PRO	A	177	6.476	-8.983	-3.364	1.00	7.84	O
ATOM	676	CB	PRO	A	177	3.535	-8.953	-4.579	1.00	6.43	C
ATOM	677	CG	PRO	A	177	4.086	-7.627	-5.027	1.00	5.53	C
50 ATOM	678	CD	PRO	A	177	4.018	-6.763	-3.780	1.00	5.57	C
ATOM	679	N	ASP	A	178	5.605	-11.022	-2.954	1.00	7.91	N
ATOM	680	CA	ASP	A	178	6.923	-11.654	-2.815	1.00	7.32	C
ATOM	681	C	ASP	A	178	7.691	-10.927	-1.693	1.00	9.26	C
ATOM	682	O	ASP	A	178	8.886	-10.638	-1.786	1.00	8.12	O
55 ATOM	683	CB	ASP	A	178	7.785	-11.636	-4.080	1.00	7.96	C
ATOM	684	CG	ASP	A	178	7.401	-12.747	-5.057	1.00	9.44	C
ATOM	685	OD1	ASP	A	178	6.251	-13.216	-5.066	1.00	8.40	O
ATOM	686	OD2	ASP	A	178	8.275	-13.156	-5.851	1.00	7.75	O
ATOM	687	N	ARG	A	179	7.008	-10.677	-0.581	1.00	8.32	N
60 ATOM	688	CA	ARG	A	179	7.517	-9.895	0.528	1.00	6.43	C
ATOM	689	C	ARG	A	179	8.684	-10.629	1.171	1.00	8.91	C
ATOM	690	O	ARG	A	179	8.739	-11.867	1.142	1.00	7.98	O
ATOM	691	CB	ARG	A	179	6.421	-9.671	1.585	1.00	6.59	C
ATOM	692	CG	ARG	A	179	6.548	-8.377	2.388	1.00	6.39	C
65 ATOM	693	CD	ARG	A	179	5.390	-8.181	3.371	1.00	5.74	C
ATOM	694	NE	ARG	A	179	5.439	-9.112	4.496	1.00	7.74	N
ATOM	695	CZ	ARG	A	179	4.466	-9.286	5.388	1.00	9.10	C
ATOM	696	NH1	ARG	A	179	3.330	-8.584	5.305	1.00	7.63	N
ATOM	697	NH2	ARG	A	179	4.658	-10.174	6.357	1.00	9.35	N
70 ATOM	698	N	ASP	A	180	9.538	-9.839	1.800	1.00	5.91	N
ATOM	699	CA	ASP	A	180	10.674	-10.407	2.538	1.00	8.70	C
ATOM	700	C	ASP	A	180	11.403	-11.412	1.678	1.00	8.46	C

	ATOM	701	O	ASP A 180	11.639	-12.554	2.082	1.00	8.16	O
	ATOM	702	CB	ASP A 180	10.138	-11.100	3.804	1.00	10.53	C
	ATOM	703	CG	ASP A 180	9.162	-10.249	4.584	1.00	11.25	C
	ATOM	704	OD1	ASP A 180	9.586	-9.194	5.098	1.00	10.71	O
5	ATOM	705	OD2	ASP A 180	7.975	-10.647	4.660	1.00	11.09	O
	ATOM	706	N	CYS A 181	11.866	-11.005	0.501	1.00	5.59	N
	ATOM	707	CA	CYS A 181	12.461	-11.902	-0.473	1.00	9.32	C
	ATOM	708	C	CYS A 181	13.595	-12.764	0.064	1.00	11.57	C
	ATOM	709	O	CYS A 181	13.790	-13.878	-0.451	1.00	9.99	O
10	ATOM	710	CB	CYS A 181	12.849	-11.108	-1.739	1.00	10.48	C
	ATOM	711	SG	CYS A 181	14.106	-9.825	-1.483	1.00	10.63	S
	ATOM	712	N	ALA A 182	14.452	-12.284	0.955	1.00	11.66	N
	ATOM	713	CA	ALA A 182	15.609	-13.089	1.370	1.00	12.75	C
	ATOM	714	C	ALA A 182	15.377	-13.877	2.645	1.00	13.68	C
15	ATOM	715	O	ALA A 182	16.312	-14.523	3.150	1.00	15.78	O
	ATOM	716	CB	ALA A 182	16.798	-12.153	1.601	1.00	13.81	C
	ATOM	717	N	ALA A 183	14.190	-13.781	3.223	1.00	12.52	N
	ATOM	718	CA	ALA A 183	13.925	-14.428	4.501	1.00	15.56	C
	ATOM	719	C	ALA A 183	13.746	-15.932	4.321	1.00	16.39	C
20	ATOM	720	O	ALA A 183	13.307	-16.398	3.278	1.00	14.02	O
	ATOM	721	CB	ALA A 183	12.721	-13.814	5.186	1.00	15.25	C
	ATOM	722	N	ALA A 184	13.975	-16.656	5.411	1.00	16.34	N
	ATOM	723	CA	ALA A 184	13.732	-18.103	5.392	1.00	18.14	C
	ATOM	724	C	ALA A 184	12.235	-18.367	5.334	1.00	18.59	C
25	ATOM	725	O	ALA A 184	11.798	-19.336	4.716	1.00	18.36	O
	ATOM	726	CB	ALA A 184	14.347	-18.746	6.629	1.00	18.88	C
	ATOM	727	N	ALA A 185	11.437	-17.518	5.972	1.00	18.11	N
	ATOM	728	CA	ALA A 185	9.987	-17.645	5.958	1.00	18.85	C
	ATOM	729	C	ALA A 185	9.374	-16.253	5.803	1.00	19.79	C
30	ATOM	730	O	ALA A 185	10.044	-15.282	6.165	1.00	21.64	O
	ATOM	731	CB	ALA A 185	9.519	-18.312	7.244	1.00	18.74	C
	ATOM	732	N	SER A 186	8.174	-16.131	5.257	1.00	16.50	N
	ATOM	733	CA	SER A 186	7.534	-14.824	5.138	1.00	14.74	C
	ATOM	734	C	SER A 186	6.037	-14.928	5.406	1.00	11.68	C
35	ATOM	735	O	SER A 186	5.400	-15.854	4.927	1.00	15.58	O
	ATOM	736	CB	SER A 186	7.669	-14.191	3.738	1.00	12.02	C
	ATOM	737	OG	SER A 186	6.873	-12.991	3.674	1.00	7.18	O
	ATOM	738	N	ASN A 187	5.474	-13.916	6.073	1.00	12.93	N
	ATOM	739	CA	ASN A 187	4.019	-13.951	6.288	1.00	14.15	C
40	ATOM	740	C	ASN A 187	3.294	-13.102	5.253	1.00	14.18	C
	ATOM	741	O	ASN A 187	2.092	-12.870	5.422	1.00	13.19	O
	ATOM	742	CB	ASN A 187	3.676	-13.526	7.709	1.00	16.10	C
	ATOM	743	CG	ASN A 187	4.233	-14.531	8.710	1.00	19.21	C
	ATOM	744	OD1	ASN A 187	4.132	-15.734	8.460	1.00	19.15	O
45	ATOM	745	ND2	ASN A 187	4.824	-14.016	9.784	1.00	19.14	N
	ATOM	746	N	GLY A 188	4.005	-12.650	4.213	1.00	10.41	N
	ATOM	747	CA	GLY A 188	3.325	-11.847	3.180	1.00	11.38	C
	ATOM	748	C	GLY A 188	2.240	-12.689	2.509	1.00	12.88	C
	ATOM	749	O	GLY A 188	2.471	-13.886	2.263	1.00	13.06	O
50	ATOM	750	N	GLU A 189	1.122	-12.085	2.113	1.00	8.31	N
	ATOM	751	CA	GLU A 189	0.035	-12.869	1.510	1.00	8.27	C
	ATOM	752	C	GLU A 189	0.009	-12.907	0.001	1.00	9.32	C
	ATOM	753	O	GLU A 189	-0.786	-13.650	-0.600	1.00	9.95	O
	ATOM	754	CB	GLU A 189	-1.306	-12.307	2.026	1.00	13.12	C
55	ATOM	755	CG	GLU A 189	-1.596	-10.879	1.619	1.00	12.11	C
	ATOM	756	CD	GLU A 189	-2.654	-10.205	2.484	1.00	17.28	C
	ATOM	757	OE1	GLU A 189	-3.502	-10.846	3.146	1.00	14.92	O
	ATOM	758	OE2	GLU A 189	-2.641	-8.957	2.510	1.00	10.34	O
	ATOM	759	N	TRP A 190	0.735	-12.007	-0.681	1.00	6.80	N
60	ATOM	760	CA	TRP A 190	0.667	-11.938	-2.126	1.00	6.48	C
	ATOM	761	C	TRP A 190	1.961	-12.320	-2.816	1.00	6.91	C
	ATOM	762	O	TRP A 190	3.045	-12.169	-2.267	1.00	7.46	O
	ATOM	763	CB	TRP A 190	0.271	-10.501	-2.546	1.00	6.49	C
	ATOM	764	CG	TRP A 190	-1.127	-10.157	-2.118	1.00	7.61	C
65	ATOM	765	CD1	TRP A 190	-2.204	-11.011	-2.031	1.00	7.87	C
	ATOM	766	CD2	TRP A 190	-1.608	-8.862	-1.737	1.00	8.08	C
	ATOM	767	NE1	TRP A 190	-3.321	-10.324	-1.599	1.00	8.98	N
	ATOM	768	CE2	TRP A 190	-2.985	-9.004	-1.429	1.00	10.21	C
	ATOM	769	CE3	TRP A 190	-1.016	-7.605	-1.624	1.00	6.64	C
70	ATOM	770	CZ2	TRP A 190	-3.762	-7.929	-0.994	1.00	8.76	C
	ATOM	771	CZ3	TRP A 190	-1.785	-6.535	-1.202	1.00	7.39	C
	ATOM	772	CH2	TRP A 190	-3.157	-6.706	-0.910	1.00	8.88	C

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      ATOM   773  N   ALA A 191    1.815 -12.812  -4.045  1.00  7.08          N
      ATOM   774  CA  ALA A 191    2.962 -13.223  -4.841  1.00  7.97          C
      ATOM   775  C   ALA A 191    2.912 -12.539  -6.197  1.00  6.92          C
      ATOM   776  O   ALA A 191    1.857 -12.425  -6.839  1.00  8.51          O
  5   ATOM   777  CB  ALA A 191    2.960 -14.745  -5.066  1.00  8.04          C
      ATOM   778  N   ILE A 192    4.096 -12.148  -6.674  1.00  6.38          N
      ATOM   779  CA  ILE A 192    4.187 -11.531  -7.990  1.00  7.15          C
      ATOM   780  C   ILE A 192    3.598 -12.423  -9.067  1.00  9.47          C
      ATOM   781  O   ILE A 192    2.875 -11.970  -9.960  1.00  8.26          O
 10   ATOM   782  CB  ILE A 192    5.670 -11.171  -8.242  1.00  9.08          C
      ATOM   783  CG1 ILE A 192    6.110 -10.095  -7.237  1.00  7.02          C
      ATOM   784  CG2 ILE A 192    5.867 -10.697  -9.671  1.00 10.47          C
      ATOM   785  CD1 ILE A 192    7.612  -9.782  -7.333  1.00  8.31          C
      ATOM   786  N   ALA A 193    3.830 -13.744  -9.006  1.00  8.91          N
 15   ATOM   787  CA  ALA A 193    3.331 -14.652 -10.052  1.00  8.35          C
      ATOM   788  C   ALA A 193    1.840 -14.919  -9.952  1.00  9.08          C
      ATOM   789  O   ALA A 193    1.250 -15.499 -10.890  1.00  9.70          O
      ATOM   790  CB  ALA A 193    4.122 -15.944  -9.990  1.00  5.81          C
      ATOM   791  N   ASN A 194    1.179 -14.440  -8.894  1.00  7.87          N
 20   ATOM   792  CA  ASN A 194   -0.260 -14.629  -8.743  1.00  9.39          C
      ATOM   793  C   ASN A 194   -1.023 -13.329  -8.518  1.00  9.01          C
      ATOM   794  O   ASN A 194   -1.675 -13.106  -7.493  1.00  7.99          O
      ATOM   795  CB  ASN A 194   -0.489 -15.590  -7.568  1.00  8.00          C
      ATOM   796  CG  ASN A 194   -1.917 -16.126  -7.515  1.00  8.97          C
 25   ATOM   797  OD1 ASN A 194   -2.644 -16.088  -8.495  1.00  9.02          O
      ATOM   798  ND2 ASN A 194   -2.306 -16.592  -6.336  1.00  8.31          N
      ATOM   799  N   ASN A 195   -0.891 -12.397  -9.451  1.00  8.58          N
      ATOM   800  CA  ASN A 195   -1.520 -11.088  -9.442  1.00  9.85          C
      ATOM   801  C   ASN A 195   -1.061 -10.154  -8.338  1.00  8.67          C
 30   ATOM   802  O   ASN A 195   -1.754  -9.165  -8.033  1.00  8.91          O
      ATOM   803  CB  ASN A 195   -3.057 -11.250  -9.381  1.00 12.56          C
      ATOM   804  CG  ASN A 195   -3.782 -10.203 -10.209  1.00 19.10          C
      ATOM   805  OD1 ASN A 195   -3.299  -9.703 -11.231  1.00 21.35          O
      ATOM   806  ND2 ASN A 195   -4.977  -9.821  -9.778  1.00 22.07          N
 35   ATOM   807  N   GLY A 196    0.135 -10.327  -7.790  1.00  8.59          N
      ATOM   808  CA  GLY A 196    0.601  -9.515  -6.670  1.00  9.21          C
      ATOM   809  C   GLY A 196    0.707  -8.029  -6.987  1.00  8.96          C
      ATOM   810  O   GLY A 196    0.419  -7.218  -6.108  1.00  7.60          O
      ATOM   811  N   VAL A 197    1.115  -7.657  -8.194  1.00  8.08          N
 40   ATOM   812  CA  VAL A 197    1.235  -6.222  -8.519  1.00 10.31          C
      ATOM   813  C   VAL A 197   -0.120  -5.546  -8.524  1.00 10.94          C
      ATOM   814  O   VAL A 197   -0.286  -4.489  -7.904  1.00  9.21          O
      ATOM   815  CB  VAL A 197    1.957  -6.067  -9.864  1.00 11.44          C
      ATOM   816  CG1 VAL A 197    1.779  -4.680 -10.467  1.00 14.20          C
 45   ATOM   817  CG2 VAL A 197    3.446  -6.345  -9.654  1.00 10.24          C
      ATOM   818  N   ASN A 198   -1.098  -6.124  -9.230  1.00  8.07          N
      ATOM   819  CA  ASN A 198   -2.440  -5.558  -9.228  1.00  9.21          C
      ATOM   820  C   ASN A 198   -3.019  -5.589  -7.809  1.00  8.59          C
      ATOM   821  O   ASN A 198   -3.643  -4.598  -7.430  1.00  6.84          O
 50   ATOM   822  CB  ASN A 198   -3.380  -6.276 -10.188  1.00 12.07          C
      ATOM   823  CG  ASN A 198   -3.021  -5.967 -11.636  1.00 15.65          C
      ATOM   824  OD1 ASN A 198   -2.439  -4.920 -11.921  1.00 18.16          O
      ATOM   825  ND2 ASN A 198   -3.343  -6.918 -12.491  1.00 19.39          N
      ATOM   826  N   ASN A 199   -2.781  -6.648  -7.045  1.00  8.80          N
 55   ATOM   827  CA  ASN A 199   -3.261  -6.673  -5.669  1.00  8.85          C
      ATOM   828  C   ASN A 199   -2.649  -5.532  -4.869  1.00  8.69          C
      ATOM   829  O   ASN A 199   -3.354  -4.844  -4.095  1.00  6.34          O
      ATOM   830  CB  ASN A 199   -2.926  -8.008  -4.977  1.00  9.54          C
      ATOM   831  CG  ASN A 199   -3.773  -9.134  -5.551  1.00 10.26          C
 60   ATOM   832  OD1 ASN A 199   -4.717  -8.930  -6.282  1.00  6.60          O
      ATOM   833  ND2 ASN A 199   -3.358 -10.343  -5.169  1.00 12.35          N
      ATOM   834  N   TYR A 200   -1.355  -5.282  -4.968  1.00  8.36          N
      ATOM   835  CA  TYR A 200   -0.721  -4.227  -4.190  1.00  7.73          C
      ATOM   836  C   TYR A 200   -1.138  -2.842  -4.636  1.00  7.43          C
 65   ATOM   837  O   TYR A 200   -1.330  -1.912  -3.846  1.00  6.72          O
      ATOM   838  CB  TYR A 200    0.797  -4.402  -4.311  1.00  7.60          C
      ATOM   839  CG  TYR A 200    1.557  -3.495  -3.363  1.00  7.71          C
      ATOM   840  CD1 TYR A 200    1.701  -3.853  -2.034  1.00  7.33          C
      ATOM   841  CD2 TYR A 200    2.119  -2.300  -3.797  1.00  5.65          C
 70   ATOM   842  CE1 TYR A 200    2.375  -3.028  -1.151  1.00  6.11          C
      ATOM   843  CE2 TYR A 200    2.816  -1.480  -2.932  1.00  6.72          C
      ATOM   844  CZ  TYR A 200    2.934  -1.846  -1.609  1.00  6.44          C
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	ATOM	845	OH	TYR A 200	3.630	-1.063	-0.706	1.00	4.84	O
	ATOM	846	N	LYS A 201	-1.249	-2.654	-5.967	1.00	6.14	N
	ATOM	847	CA	LYS A 201	-1.711	-1.332	-6.421	1.00	8.44	C
	ATOM	848	C	LYS A 201	-3.084	-0.987	-5.888	1.00	8.09	C
5	ATOM	849	O	LYS A 201	-3.358	0.162	-5.537	1.00	7.64	O
	ATOM	850	CB	LYS A 201	-1.722	-1.275	-7.958	1.00	8.28	C
	ATOM	851	CG	LYS A 201	-0.263	-1.194	-8.455	1.00	11.36	C
	ATOM	852	CD	LYS A 201	-0.270	-1.168	-9.985	1.00	17.13	C
	ATOM	853	CE	LYS A 201	1.119	-0.858	-10.519	1.00	24.94	C
10	ATOM	854	NZ	LYS A 201	1.127	-0.609	-11.994	1.00	28.50	N
	ATOM	855	N	ALA A 202	-3.996	-1.970	-5.845	1.00	5.77	N
	ATOM	856	CA	ALA A 202	-5.339	-1.699	-5.334	1.00	4.88	C
	ATOM	857	C	ALA A 202	-5.303	-1.387	-3.846	1.00	7.44	C
	ATOM	858	O	ALA A 202	-6.086	-0.566	-3.327	1.00	7.04	O
15	ATOM	859	CB	ALA A 202	-6.274	-2.864	-5.654	1.00	6.18	C
	ATOM	860	N	TYR A 203	-4.447	-2.079	-3.096	1.00	6.09	N
	ATOM	861	CA	TYR A 203	-4.255	-1.839	-1.660	1.00	6.29	C
	ATOM	862	C	TYR A 203	-3.753	-0.412	-1.434	1.00	7.79	C
	ATOM	863	O	TYR A 203	-4.301	0.324	-0.608	1.00	8.11	O
20	ATOM	864	CB	TYR A 203	-3.305	-2.875	-1.132	1.00	8.66	C
	ATOM	865	CG	TYR A 203	-2.451	-2.706	0.101	1.00	7.91	C
	ATOM	866	CD1	TYR A 203	-1.162	-2.207	-0.008	1.00	8.34	C
	ATOM	867	CD2	TYR A 203	-2.886	-3.130	1.346	1.00	6.58	C
	ATOM	868	CE1	TYR A 203	-0.339	-2.076	1.106	1.00	7.67	C
25	ATOM	869	CE2	TYR A 203	-2.071	-3.013	2.464	1.00	6.79	C
	ATOM	870	CZ	TYR A 203	-0.805	-2.506	2.334	1.00	6.29	C
	ATOM	871	OH	TYR A 203	0.025	-2.399	3.437	1.00	7.31	O
	ATOM	872	N	ILE A 204	-2.737	0.009	-2.173	1.00	6.92	N
	ATOM	873	CA	ILE A 204	-2.239	1.390	-2.051	1.00	7.79	C
30	ATOM	874	C	ILE A 204	-3.362	2.374	-2.397	1.00	9.37	C
	ATOM	875	O	ILE A 204	-3.577	3.389	-1.721	1.00	6.39	O
	ATOM	876	CB	ILE A 204	-1.038	1.581	-2.999	1.00	7.73	C
	ATOM	877	CG1	ILE A 204	0.193	0.800	-2.523	1.00	6.07	C
	ATOM	878	CG2	ILE A 204	-0.725	3.066	-3.180	1.00	7.51	C
35	ATOM	879	CD1	ILE A 204	0.716	1.160	-1.132	1.00	6.22	C
	ATOM	880	N	ASN A 205	-4.148	2.106	-3.436	1.00	7.38	N
	ATOM	881	CA	ASN A 205	-5.225	2.975	-3.886	1.00	7.98	C
	ATOM	882	C	ASN A 205	-6.309	3.135	-2.825	1.00	8.46	C
	ATOM	883	O	ASN A 205	-6.838	4.226	-2.623	1.00	7.81	O
40	ATOM	884	CB	ASN A 205	-5.875	2.429	-5.171	1.00	10.52	C
	ATOM	885	CG	ASN A 205	-4.998	2.549	-6.397	1.00	13.03	C
	ATOM	886	OD1	ASN A 205	-4.030	3.305	-6.346	1.00	11.52	O
	ATOM	887	ND2	ASN A 205	-5.294	1.837	-7.478	1.00	13.75	N
	ATOM	888	N	ARG A 206	-6.674	2.048	-2.147	1.00	7.82	N
45	ATOM	889	CA	ARG A 206	-7.691	2.110	-1.098	1.00	5.94	C
	ATOM	890	C	ARG A 206	-7.129	2.869	0.098	1.00	6.34	C
	ATOM	891	O	ARG A 206	-7.811	3.702	0.689	1.00	6.50	O
	ATOM	892	CB	ARG A 206	-8.131	0.704	-0.678	1.00	7.36	C
	ATOM	893	CG	ARG A 206	-9.162	0.698	0.434	1.00	9.57	C
50	ATOM	894	CD	ARG A 206	-10.424	1.492	0.047	1.00	11.46	C
	ATOM	895	NE	ARG A 206	-11.310	1.549	1.207	1.00	9.53	N
	ATOM	896	CZ	ARG A 206	-12.180	2.501	1.508	1.00	13.46	C
	ATOM	897	NH1	ARG A 206	-12.351	3.567	0.730	1.00	10.85	N
	ATOM	898	NH2	ARG A 206	-12.883	2.371	2.629	1.00	15.76	N
55	ATOM	899	N	ILE A 207	-5.869	2.603	0.470	1.00	5.91	N
	ATOM	900	CA	ILE A 207	-5.243	3.399	1.535	1.00	6.69	C
	ATOM	901	C	ILE A 207	-5.280	4.901	1.186	1.00	6.65	C
	ATOM	902	O	ILE A 207	-5.635	5.728	2.039	1.00	5.55	O
	ATOM	903	CB	ILE A 207	-3.772	2.974	1.749	1.00	4.84	C
60	ATOM	904	CG1	ILE A 207	-3.769	1.547	2.340	1.00	6.07	C
	ATOM	905	CG2	ILE A 207	-3.072	3.984	2.664	1.00	5.33	C
	ATOM	906	CD1	ILE A 207	-2.368	0.923	2.318	1.00	6.90	C
	ATOM	907	N	ARG A 208	-4.945	5.229	-0.056	1.00	5.80	N
	ATOM	908	CA	ARG A 208	-4.962	6.626	-0.500	1.00	7.25	C
65	ATOM	909	C	ARG A 208	-6.349	7.205	-0.305	1.00	8.00	C
	ATOM	910	O	ARG A 208	-6.494	8.305	0.255	1.00	7.26	O
	ATOM	911	CB	ARG A 208	-4.500	6.734	-1.967	1.00	7.91	C
	ATOM	912	CG	ARG A 208	-4.591	8.134	-2.560	1.00	8.82	C
	ATOM	913	CD	ARG A 208	-4.430	8.105	-4.089	1.00	12.48	C
70	ATOM	914	NE	ARG A 208	-4.761	9.411	-4.660	1.00	17.58	N
	ATOM	915	CZ	ARG A 208	-4.008	10.500	-4.595	1.00	18.05	C
	ATOM	916	NH1	ARG A 208	-2.813	10.447	-4.042	1.00	18.69	N

	ATOM	917	NH2	ARG	A	208	-4.390	11.662	-5.107	1.00	18.85	N
	ATOM	918	N	GLU	A	209	-7.387	6.464	-0.697	1.00	8.98	N
	ATOM	919	CA	GLU	A	209	-8.762	6.936	-0.549	1.00	9.20	C
	ATOM	920	C	GLU	A	209	-9.100	7.252	0.907	1.00	9.37	C
5	ATOM	921	O	GLU	A	209	-9.811	8.213	1.198	1.00	5.42	O
	ATOM	922	CB	GLU	A	209	-9.801	5.898	-1.011	1.00	14.19	C
	ATOM	923	CG	GLU	A	209	-9.775	5.577	-2.482	1.00	19.51	C
	ATOM	924	CD	GLU	A	209	-10.953	4.737	-2.955	1.00	27.56	C
	ATOM	925	OE1	GLU	A	209	-11.688	4.142	-2.142	1.00	23.86	O
10	ATOM	926	OE2	GLU	A	209	-11.168	4.699	-4.190	1.00	31.35	O
	ATOM	927	N	ILE	A	210	-8.689	6.342	1.796	1.00	8.27	N
	ATOM	928	CA	ILE	A	210	-8.939	6.537	3.227	1.00	8.19	C
	ATOM	929	C	ILE	A	210	-8.127	7.721	3.754	1.00	7.27	C
	ATOM	930	O	ILE	A	210	-8.739	8.567	4.436	1.00	8.19	O
15	ATOM	931	CB	ILE	A	210	-8.574	5.249	3.992	1.00	9.16	C
	ATOM	932	CG1	ILE	A	210	-9.549	4.163	3.491	1.00	8.59	C
	ATOM	933	CG2	ILE	A	210	-8.663	5.453	5.503	1.00	7.84	C
	ATOM	934	CD1	ILE	A	210	-9.135	2.750	3.850	1.00	10.60	C
	ATOM	935	N	LEU	A	211	-6.863	7.839	3.375	1.00	5.07	N
20	ATOM	936	CA	LEU	A	211	-6.078	8.999	3.850	1.00	6.69	C
	ATOM	937	C	LEU	A	211	-6.699	10.305	3.366	1.00	6.81	C
	ATOM	938	O	LEU	A	211	-6.818	11.271	4.153	1.00	8.01	O
	ATOM	939	CB	LEU	A	211	-4.601	8.904	3.452	1.00	4.38	C
	ATOM	940	CG	LEU	A	211	-3.888	7.624	3.952	1.00	7.45	C
25	ATOM	941	CD1	LEU	A	211	-2.414	7.656	3.560	1.00	8.00	C
	ATOM	942	CD2	LEU	A	211	-4.015	7.430	5.452	1.00	5.27	C
	ATOM	943	N	ILE	A	212	-7.118	10.390	2.120	1.00	7.40	N
	ATOM	944	CA	ILE	A	212	-7.801	11.589	1.608	1.00	6.87	C
	ATOM	945	C	ILE	A	212	-9.026	11.931	2.435	1.00	9.74	C
30	ATOM	946	O	ILE	A	212	-9.303	13.118	2.669	1.00	8.71	O
	ATOM	947	CB	ILE	A	212	-8.200	11.389	0.129	1.00	11.16	C
	ATOM	948	CG1	ILE	A	212	-6.928	11.407	-0.743	1.00	13.44	C
	ATOM	949	CG2	ILE	A	212	-9.192	12.447	-0.350	1.00	10.28	C
	ATOM	950	CD1	ILE	A	212	-7.159	11.067	-2.205	1.00	14.96	C
35	ATOM	951	N	SER	A	213	-9.794	10.940	2.885	1.00	9.55	N
	ATOM	952	CA	SER	A	213	-10.992	11.131	3.688	1.00	9.05	C
	ATOM	953	C	SER	A	213	-10.670	11.535	5.124	1.00	10.31	C
	ATOM	954	O	SER	A	213	-11.534	12.085	5.825	1.00	10.55	O
	ATOM	955	CB	SER	A	213	-11.906	9.887	3.682	1.00	10.81	C
40	ATOM	956	OG	SER	A	213	-11.416	8.921	4.600	1.00	14.21	O
	ATOM	957	N	PHE	A	214	-9.423	11.361	5.552	1.00	7.72	N
	ATOM	958	CA	PHE	A	214	-8.973	11.784	6.869	1.00	6.91	C
	ATOM	959	C	PHE	A	214	-7.857	12.811	6.726	1.00	6.54	C
	ATOM	960	O	PHE	A	214	-6.825	12.751	7.397	1.00	5.46	O
45	ATOM	961	CB	PHE	A	214	-8.517	10.572	7.718	1.00	7.89	C
	ATOM	962	CG	PHE	A	214	-9.681	9.776	8.269	1.00	7.67	C
	ATOM	963	CD1	PHE	A	214	-10.359	10.203	9.394	1.00	6.38	C
	ATOM	964	CD2	PHE	A	214	-10.100	8.616	7.637	1.00	8.19	C
	ATOM	965	CE1	PHE	A	214	-11.432	9.478	9.884	1.00	10.20	C
50	ATOM	966	CE2	PHE	A	214	-11.173	7.884	8.124	1.00	10.30	C
	ATOM	967	CZ	PHE	A	214	-11.842	8.314	9.262	1.00	9.78	C
	ATOM	968	N	SER	A	215	-8.016	13.782	5.808	1.00	4.80	N
	ATOM	969	CA	SER	A	215	-6.997	14.821	5.612	1.00	6.15	C
	ATOM	970	C	SER	A	215	-6.789	15.757	6.800	1.00	7.31	C
55	ATOM	971	O	SER	A	215	-5.872	16.593	6.816	1.00	7.37	O
	ATOM	972	CB	SER	A	215	-7.343	15.653	4.369	1.00	7.97	C
	ATOM	973	OG	SER	A	215	-8.585	16.325	4.547	1.00	11.45	O
	ATOM	974	N	ASP	A	216	-7.645	15.679	7.812	1.00	6.24	N
	ATOM	975	CA	ASP	A	216	-7.578	16.404	9.055	1.00	8.27	C
60	ATOM	976	C	ASP	A	216	-6.767	15.636	10.105	1.00	9.81	C
	ATOM	977	O	ASP	A	216	-6.671	16.088	11.245	1.00	9.16	O
	ATOM	978	CB	ASP	A	216	-8.980	16.663	9.637	1.00	9.81	C
	ATOM	979	CG	ASP	A	216	-9.831	15.421	9.784	1.00	12.85	C
	ATOM	980	OD1	ASP	A	216	-9.695	14.429	9.033	1.00	10.45	O
65	ATOM	981	OD2	ASP	A	216	-10.692	15.391	10.687	1.00	15.34	O
	ATOM	982	N	VAL	A	217	-6.190	14.487	9.749	1.00	5.95	N
	ATOM	983	CA	VAL	A	217	-5.360	13.723	10.683	1.00	5.79	C
	ATOM	984	C	VAL	A	217	-3.938	13.613	10.124	1.00	7.70	C
	ATOM	985	O	VAL	A	217	-3.735	12.902	9.151	1.00	5.95	O
70	ATOM	986	CB	VAL	A	217	-5.911	12.334	10.993	1.00	9.08	C
	ATOM	987	CG1	VAL	A	217	-4.996	11.613	11.995	1.00	8.10	C
	ATOM	988	CG2	VAL	A	217	-7.317	12.378	11.593	1.00	8.01	C

ATOM	989	N	ARG	A 218	-2.984	14.287	10.773	1.00	7.72	N
ATOM	990	CA	ARG	A 218	-1.606	14.206	10.279	1.00	8.05	C
ATOM	991	C	ARG	A 218	-1.222	12.723	10.372	1.00	9.55	C
ATOM	992	O	ARG	A 218	-1.431	12.118	11.429	1.00	8.04	O
5 ATOM	993	CB	ARG	A 218	-0.644	15.065	11.087	1.00	9.92	C
ATOM	994	CG	ARG	A 218	0.727	15.180	10.422	1.00	12.76	C
ATOM	995	CD	ARG	A 218	1.728	15.977	11.253	1.00	10.15	C
ATOM	996	NE	ARG	A 218	1.237	17.334	11.507	1.00	11.99	N
ATOM	997	CZ	ARG	A 218	1.944	18.259	12.160	1.00	13.54	C
10 ATOM	998	NH1	ARG	A 218	3.164	17.975	12.601	1.00	12.59	N
ATOM	999	NH2	ARG	A 218	1.452	19.476	12.384	1.00	10.56	N
ATOM	1000	N	THR	A 219	-0.697	12.195	9.276	1.00	7.51	N
ATOM	1001	CA	THR	A 219	-0.395	10.762	9.218	1.00	8.29	C
ATOM	1002	C	THR	A 219	1.046	10.497	8.809	1.00	8.47	C
15 ATOM	1003	O	THR	A 219	1.514	10.933	7.766	1.00	6.27	O
ATOM	1004	CB	THR	A 219	-1.359	10.093	8.215	1.00	8.28	C
ATOM	1005	OG1	THR	A 219	-2.725	10.291	8.627	1.00	7.46	O
ATOM	1006	CG2	THR	A 219	-1.118	8.588	8.121	1.00	8.07	C
ATOM	1007	N	ILE	A 220	1.781	9.799	9.677	1.00	7.04	N
20 ATOM	1008	CA	ILE	A 220	3.192	9.486	9.398	1.00	7.74	C
ATOM	1009	C	ILE	A 220	3.272	8.026	8.982	1.00	6.46	C
ATOM	1010	O	ILE	A 220	2.739	7.170	9.692	1.00	5.26	O
ATOM	1011	CB	ILE	A 220	4.044	9.834	10.625	1.00	7.97	C
ATOM	1012	CG1	ILE	A 220	3.943	11.354	10.891	1.00	9.58	C
25 ATOM	1013	CG2	ILE	A 220	5.493	9.406	10.446	1.00	8.88	C
ATOM	1014	CD1	ILE	A 220	4.225	11.767	12.324	1.00	11.24	C
ATOM	1015	N	LEU	A 221	3.910	7.730	7.846	1.00	4.42	N
ATOM	1016	CA	LEU	A 221	4.010	6.376	7.365	1.00	6.25	C
ATOM	1017	C	LEU	A 221	5.442	5.863	7.213	1.00	8.14	C
30 ATOM	1018	O	LEU	A 221	6.346	6.579	6.779	1.00	7.11	O
ATOM	1019	CB	LEU	A 221	3.407	6.243	5.931	1.00	6.11	C
ATOM	1020	CG	LEU	A 221	1.985	6.793	5.768	1.00	8.34	C
ATOM	1021	CD1	LEU	A 221	1.566	6.788	4.300	1.00	8.35	C
ATOM	1022	CD2	LEU	A 221	0.973	5.975	6.577	1.00	4.68	C
35 ATOM	1023	N	VAL	A 222	5.592	4.582	7.549	1.00	5.20	N
ATOM	1024	CA	VAL	A 222	6.867	3.906	7.304	1.00	5.61	C
ATOM	1025	C	VAL	A 222	6.541	3.014	6.099	1.00	5.98	C
ATOM	1026	O	VAL	A 222	5.570	2.247	6.152	1.00	6.56	O
ATOM	1027	CB	VAL	A 222	7.393	3.085	8.477	1.00	8.41	C
40 ATOM	1028	CG1	VAL	A 222	8.539	2.173	8.068	1.00	6.12	C
ATOM	1029	CG2	VAL	A 222	7.894	4.027	9.576	1.00	6.69	C
ATOM	1030	N	ILE	A 223	7.297	3.159	5.014	1.00	6.12	N
ATOM	1031	CA	ILE	A 223	7.018	2.373	3.826	1.00	5.11	C
ATOM	1032	C	ILE	A 223	7.865	1.110	3.763	1.00	6.29	C
45 ATOM	1033	O	ILE	A 223	9.086	1.170	3.619	1.00	5.79	O
ATOM	1034	CB	ILE	A 223	7.239	3.173	2.517	1.00	5.92	C
ATOM	1035	CG1	ILE	A 223	6.440	4.490	2.557	1.00	5.92	C
ATOM	1036	CG2	ILE	A 223	6.843	2.332	1.305	1.00	9.29	C
ATOM	1037	CD1	ILE	A 223	4.940	4.302	2.735	1.00	3.99	C
50 ATOM	1038	N	GLU	A 224	7.174	-0.023	3.783	1.00	7.38	N
ATOM	1039	CA	GLU	A 224	7.718	-1.348	3.561	1.00	5.45	C
ATOM	1040	C	GLU	A 224	9.063	-1.750	4.140	1.00	6.90	C
ATOM	1041	O	GLU	A 224	10.090	-1.913	3.466	1.00	5.04	O
ATOM	1042	CB	GLU	A 224	7.752	-1.568	2.032	1.00	6.41	C
55 ATOM	1043	CG	GLU	A 224	6.387	-1.497	1.317	1.00	4.81	C
ATOM	1044	CD	GLU	A 224	5.466	-2.652	1.652	1.00	6.84	C
ATOM	1045	OE1	GLU	A 224	5.958	-3.707	2.120	1.00	6.22	O
ATOM	1046	OE2	GLU	A 224	4.237	-2.557	1.460	1.00	5.52	O
ATOM	1047	N	PRO	A 225	9.084	-2.095	5.423	1.00	6.71	N
60 ATOM	1048	CA	PRO	A 225	10.274	-2.656	6.051	1.00	8.09	C
ATOM	1049	C	PRO	A 225	10.767	-3.901	5.313	1.00	10.00	C
ATOM	1050	O	PRO	A 225	10.009	-4.657	4.678	1.00	7.14	O
ATOM	1051	CB	PRO	A 225	9.770	-3.045	7.438	1.00	9.09	C
ATOM	1052	CG	PRO	A 225	8.619	-2.126	7.711	1.00	7.49	C
65 ATOM	1053	CD	PRO	A 225	7.926	-1.993	6.363	1.00	6.45	C
ATOM	1054	N	ASP	A 226	12.084	-4.153	5.348	1.00	10.93	N
ATOM	1055	CA	ASP	A 226	12.639	-5.358	4.718	1.00	10.38	C
ATOM	1056	C	ASP	A 226	12.259	-5.464	3.249	1.00	10.37	C
ATOM	1057	O	ASP	A 226	11.984	-6.559	2.750	1.00	10.02	O
70 ATOM	1058	CB	ASP	A 226	12.172	-6.595	5.489	1.00	13.13	C
ATOM	1059	CG	AASP	A 226	12.883	-7.895	5.169	0.50	11.23	C
ATOM	1060	CG	BASP	A 226	12.838	-6.714	6.844	0.50	16.23	C

	ATOM	1061	OD2A	ASP	A	226	12.269	-8.989	5.193	0.50	7.45	O
	ATOM	1062	OD2B	ASP	A	226	13.364	-5.720	7.384	0.50	17.41	O
	ATOM	1063	OD1A	ASP	A	226	14.097	-7.854	4.880	0.50	10.95	O
	ATOM	1064	OD1B	ASP	A	226	12.859	-7.821	7.414	0.50	18.21	O
5	ATOM	1065	N	SER	A	227	12.377	-4.362	2.506	1.00	7.14	N
	ATOM	1066	CA	SER	A	227	12.089	-4.405	1.069	1.00	8.07	C
	ATOM	1067	C	SER	A	227	13.321	-3.964	0.290	1.00	8.60	C
	ATOM	1068	O	SER	A	227	14.169	-4.804	-0.011	1.00	7.25	O
	ATOM	1069	CB	SER	A	227	10.844	-3.643	0.674	1.00	8.53	C
10	ATOM	1070	OG	SER	A	227	10.899	-2.242	0.929	1.00	6.19	O
	ATOM	1071	N	LEU	A	228	13.467	-2.671	0.005	1.00	9.78	N
	ATOM	1072	CA	LEU	A	228	14.606	-2.190	-0.765	1.00	10.16	C
	ATOM	1073	C	LEU	A	228	15.971	-2.396	-0.150	1.00	11.89	C
	ATOM	1074	O	LEU	A	228	16.936	-2.500	-0.923	1.00	9.90	O
15	ATOM	1075	CB	LEU	A	228	14.415	-0.717	-1.154	1.00	12.52	C
	ATOM	1076	CG	LEU	A	228	13.187	-0.457	-2.044	1.00	10.94	C
	ATOM	1077	CD1	LEU	A	228	13.015	1.032	-2.258	1.00	10.51	C
	ATOM	1078	CD2	LEU	A	228	13.333	-1.187	-3.379	1.00	12.27	C
	ATOM	1079	N	ALA	A	229	16.106	-2.590	1.158	1.00	10.91	N
20	ATOM	1080	CA	ALA	A	229	17.402	-2.905	1.755	1.00	10.73	C
	ATOM	1081	C	ALA	A	229	17.939	-4.214	1.165	1.00	9.94	C
	ATOM	1082	O	ALA	A	229	19.151	-4.412	1.091	1.00	8.43	O
	ATOM	1083	CB	ALA	A	229	17.331	-3.029	3.270	1.00	10.39	C
	ATOM	1084	N	ASN	A	230	17.043	-5.134	0.796	1.00	10.02	N
25	ATOM	1085	CA	ASN	A	230	17.402	-6.383	0.154	1.00	9.78	C
	ATOM	1086	C	ASN	A	230	18.080	-6.167	-1.190	1.00	11.01	C
	ATOM	1087	O	ASN	A	230	18.924	-6.985	-1.607	1.00	8.16	O
	ATOM	1088	CB	ASN	A	230	16.180	-7.289	-0.076	1.00	10.90	C
	ATOM	1089	CG	ASN	A	230	15.665	-7.868	1.232	1.00	13.68	C
30	ATOM	1090	OD1	ASN	A	230	16.356	-8.610	1.937	1.00	11.06	O
	ATOM	1091	ND2	ASN	A	230	14.437	-7.511	1.589	1.00	15.05	N
	ATOM	1092	N	MET	A	231	17.715	-5.091	-1.899	1.00	9.45	N
	ATOM	1093	CA	MET	A	231	18.340	-4.808	-3.192	1.00	10.59	C
	ATOM	1094	C	MET	A	231	19.808	-4.410	-3.053	1.00	10.84	C
35	ATOM	1095	O	MET	A	231	20.564	-4.461	-4.022	1.00	12.21	O
	ATOM	1096	CB	MET	A	231	17.608	-3.666	-3.919	1.00	12.34	C
	ATOM	1097	CG	MET	A	231	16.450	-4.121	-4.794	1.00	15.64	C
	ATOM	1098	SD	MET	A	231	15.058	-4.853	-3.927	1.00	11.65	S
	ATOM	1099	CE	MET	A	231	15.413	-6.601	-3.854	1.00	13.16	C
40	ATOM	1100	N	VAL	A	232	20.200	-3.884	-1.900	1.00	11.74	N
	ATOM	1101	CA	VAL	A	232	21.588	-3.474	-1.680	1.00	11.04	C
	ATOM	1102	C	VAL	A	232	22.452	-4.703	-1.472	1.00	11.67	C
	ATOM	1103	O	VAL	A	232	23.484	-4.871	-2.124	1.00	13.75	O
	ATOM	1104	CB	VAL	A	232	21.697	-2.530	-0.458	1.00	10.10	C
45	ATOM	1105	CG1	VAL	A	232	23.134	-2.096	-0.176	1.00	12.45	C
	ATOM	1106	CG2	VAL	A	232	20.817	-1.303	-0.703	1.00	10.12	C
	ATOM	1107	N	THR	A	233	22.042	-5.620	-0.579	1.00	11.16	N
	ATOM	1108	CA	THR	A	233	22.885	-6.754	-0.252	1.00	11.44	C
	ATOM	1109	C	THR	A	233	22.409	-8.159	-0.569	1.00	12.43	C
50	ATOM	1110	O	THR	A	233	23.254	-9.071	-0.499	1.00	13.82	O
	ATOM	1111	CB	THR	A	233	23.152	-6.773	1.286	1.00	12.21	C
	ATOM	1112	OG1	THR	A	233	21.935	-7.075	1.982	1.00	11.48	O
	ATOM	1113	CG2	THR	A	233	23.726	-5.458	1.773	1.00	12.53	C
	ATOM	1114	N	ASN	A	234	21.127	-8.356	-0.818	1.00	11.88	N
55	ATOM	1115	CA	ASN	A	234	20.616	-9.717	-0.990	1.00	13.01	C
	ATOM	1116	C	ASN	A	234	20.192	-10.087	-2.389	1.00	13.03	C
	ATOM	1117	O	ASN	A	234	19.417	-11.045	-2.547	1.00	12.32	O
	ATOM	1118	CB	ASN	A	234	19.422	-9.917	-0.011	1.00	11.09	C
	ATOM	1119	CG	ASN	A	234	19.900	-9.933	1.425	1.00	12.72	C
60	ATOM	1120	OD1	ASN	A	234	21.021	-10.376	1.709	1.00	15.41	O
	ATOM	1121	ND2	ASN	A	234	19.083	-9.488	2.364	1.00	11.44	N
	ATOM	1122	N	MET	A	235	20.732	-9.438	-3.422	1.00	13.27	N
	ATOM	1123	CA	MET	A	235	20.423	-9.806	-4.801	1.00	15.84	C
	ATOM	1124	C	MET	A	235	20.991	-11.142	-5.243	1.00	16.75	C
65	ATOM	1125	O	MET	A	235	20.510	-11.707	-6.236	1.00	16.47	O
	ATOM	1126	CB	MET	A	235	20.954	-8.728	-5.757	1.00	16.88	C
	ATOM	1127	CG	MET	A	235	20.264	-7.389	-5.527	1.00	19.25	C
	ATOM	1128	SD	MET	A	235	18.530	-7.530	-6.067	1.00	18.42	S
	ATOM	1129	CE	MET	A	235	18.808	-7.014	-7.770	1.00	13.39	C
70	ATOM	1130	N	ASN	A	236	21.905	-11.734	-4.466	1.00	16.70	N
	ATOM	1131	CA	ASN	A	236	22.385	-13.080	-4.752	1.00	18.69	C
	ATOM	1132	C	ASN	A	236	21.281	-14.103	-4.516	1.00	17.60	C

	ATOM	1133	O	ASN A 236	21.370	−15.234	−5.014	1.00	19.39	O
	ATOM	1134	CB	ASN A 236	23.592	−13.434	−3.878	1.00	24.86	C
	ATOM	1135	CG	ASN A 236	23.375	−13.190	−2.401	1.00	29.76	C
	ATOM	1136	OD1	ASN A 236	23.012	−12.095	−1.965	1.00	30.79	O
5	ATOM	1137	ND2	ASN A 236	23.608	−14.195	−1.564	1.00	32.96	N
	ATOM	1138	N	VAL A 237	20.265	−13.744	−3.720	1.00	12.86	N
	ATOM	1139	CA	VAL A 237	19.159	−14.656	−3.440	1.00	10.84	C
	ATOM	1140	C	VAL A 237	18.199	−14.566	−4.601	1.00	10.77	C
	ATOM	1141	O	VAL A 237	17.678	−13.470	−4.874	1.00	8.02	O
10	ATOM	1142	CB	VAL A 237	18.450	−14.269	−2.128	1.00	12.65	C
	ATOM	1143	CG1	VAL A 237	17.229	−15.166	−1.897	1.00	9.59	C
	ATOM	1144	CG2	VAL A 237	19.411	−14.335	−0.951	1.00	12.38	C
	ATOM	1145	N	PRO A 238	17.933	−15.670	−5.290	1.00	11.53	N
	ATOM	1146	CA	PRO A 238	17.135	−15.606	−6.508	1.00	13.54	C
15	ATOM	1147	C	PRO A 238	15.788	−14.927	−6.356	1.00	13.33	C
	ATOM	1148	O	PRO A 238	15.396	−14.168	−7.260	1.00	11.57	O
	ATOM	1149	CB	PRO A 238	17.065	−17.067	−6.975	1.00	14.34	C
	ATOM	1150	CG	PRO A 238	18.402	−17.598	−6.532	1.00	13.36	C
	ATOM	1151	CD	PRO A 238	18.597	−16.987	−5.147	1.00	12.77	C
20	ATOM	1152	N	LYS A 239	15.057	−15.133	−5.272	1.00	9.72	N
	ATOM	1153	CA	LYS A 239	13.747	−14.485	−5.107	1.00	11.18	C
	ATOM	1154	C	LYS A 239	13.898	−12.963	−5.032	1.00	11.25	C
	ATOM	1155	O	LYS A 239	13.080	−12.221	−5.597	1.00	10.72	O
	ATOM	1156	CB	LYS A 239	13.000	−15.028	−3.895	1.00	11.60	C
25	ATOM	1157	CG	LYS A 239	11.556	−14.534	−3.816	1.00	9.45	C
	ATOM	1158	CD	LYS A 239	10.745	−15.325	−2.815	1.00	12.82	C
	ATOM	1159	CE	LYS A 239	9.280	−14.874	−2.783	1.00	11.28	C
	ATOM	1160	NZ	LYS A 239	8.531	−15.664	−1.755	1.00	13.11	N
	ATOM	1161	N	CYS A 240	14.998	−12.503	−4.454	1.00	9.32	N
30	ATOM	1162	CA	CYS A 240	15.282	−11.070	−4.374	1.00	11.03	C
	ATOM	1163	C	CYS A 240	15.647	−10.495	−5.727	1.00	11.24	C
	ATOM	1164	O	CYS A 240	15.131	−9.438	−6.097	1.00	11.81	O
	ATOM	1165	CB	CYS A 240	16.353	−10.776	−3.337	1.00	11.15	C
	ATOM	1166	SG	CYS A 240	15.880	−10.935	−1.606	1.00	10.16	S
35	ATOM	1167	N	SER A 241	16.485	−11.187	−6.535	1.00	11.59	N
	ATOM	1168	CA	SER A 241	16.794	−10.609	−7.842	1.00	10.98	C
	ATOM	1169	C	SER A 241	15.546	−10.620	−8.721	1.00	12.23	C
	ATOM	1170	O	SER A 241	15.364	−9.712	−9.539	1.00	10.81	O
	ATOM	1171	CB	SER A 241	17.975	−11.312	−8.522	1.00	14.36	C
40	ATOM	1172	OG	SER A 241	17.623	−12.670	−8.727	1.00	17.92	O
	ATOM	1173	N	GLY A 242	14.682	−11.620	−8.525	1.00	9.61	N
	ATOM	1174	CA	GLY A 242	13.437	−11.713	−9.280	1.00	11.36	C
	ATOM	1175	C	GLY A 242	12.417	−10.676	−8.821	1.00	9.27	C
	ATOM	1176	O	GLY A 242	11.547	−10.289	−9.600	1.00	9.69	O
45	ATOM	1177	N	ALA A 243	12.504	−10.218	−7.577	1.00	8.27	N
	ATOM	1178	CA	ALA A 243	11.534	−9.251	−7.064	1.00	9.72	C
	ATOM	1179	C	ALA A 243	11.966	−7.798	−7.195	1.00	9.87	C
	ATOM	1180	O	ALA A 243	11.124	−6.889	−7.101	1.00	7.13	O
	ATOM	1181	CB	ALA A 243	11.322	−9.519	−5.570	1.00	9.32	C
50	ATOM	1182	N	ALA A 244	13.264	−7.577	−7.399	1.00	9.86	N
	ATOM	1183	CA	ALA A 244	13.819	−6.236	−7.422	1.00	9.88	C
	ATOM	1184	C	ALA A 244	13.058	−5.229	−8.259	1.00	9.98	C
	ATOM	1185	O	ALA A 244	12.794	−4.128	−7.758	1.00	8.52	O
	ATOM	1186	CB	ALA A 244	15.293	−6.280	−7.855	1.00	8.30	C
55	ATOM	1187	N	SER A 245	12.827	−5.478	−9.557	1.00	9.52	N
	ATOM	1188	CA	SER A 245	12.158	−4.461	−10.365	1.00	10.82	C
	ATOM	1189	C	SER A 245	10.756	−4.175	−9.832	1.00	11.56	C
	ATOM	1190	O	SER A 245	10.316	−3.022	−9.846	1.00	11.54	O
	ATOM	1191	CB	SER A 245	12.087	−4.828	−11.856	1.00	11.02	C
60	ATOM	1192	OG A	SER A 245	11.406	−6.064	−12.001	0.50	13.46	O
	ATOM	1193	OG B	SER A 245	13.372	−4.621	−12.429	0.50	11.05	O
	ATOM	1194	N	THR A 246	10.041	−5.209	−9.369	1.00	10.04	N
	ATOM	1195	CA	THR A 246	8.708	−5.019	−8.815	1.00	10.31	C
	ATOM	1196	C	THR A 246	8.746	−4.210	−7.530	1.00	8.77	C
65	ATOM	1197	O	THR A 246	7.950	−3.275	−7.371	1.00	9.85	O
	ATOM	1198	CB	THR A 246	8.040	−6.387	−8.524	1.00	11.56	C
	ATOM	1199	OG1	THR A 246	7.898	−7.080	−9.757	1.00	9.95	O
	ATOM	1200	CG2	THR A 246	6.675	−6.177	−7.889	1.00	13.88	C
	ATOM	1201	N	TYR A 247	9.687	−4.501	−6.633	1.00	7.35	N
70	ATOM	1202	CA	TYR A 247	9.820	−3.680	−5.425	1.00	5.31	C
	ATOM	1203	C	TYR A 247	10.095	−2.223	−5.818	1.00	8.45	C
	ATOM	1204	O	TYR A 247	9.554	−1.322	−5.174	1.00	8.15	O

	ATOM	1205	CB	TYR A 247	10.964	-4.149	-4.543	1.00	7.25	C
	ATOM	1206	CG	TYR A 247	10.812	-5.356	-3.654	1.00	5.93	C
	ATOM	1207	CD1	TYR A 247	9.760	-6.251	-3.782	1.00	7.84	C
	ATOM	1208	CD2	TYR A 247	11.782	-5.599	-2.687	1.00	5.89	C
5	ATOM	1209	CE1	TYR A 247	9.683	-7.359	-2.943	1.00	8.77	C
	ATOM	1210	CE2	TYR A 247	11.738	-6.708	-1.864	1.00	7.30	C
	ATOM	1211	CZ	TYR A 247	10.670	-7.583	-2.005	1.00	8.15	C
	ATOM	1212	OH	TYR A 247	10.621	-8.706	-1.200	1.00	9.79	O
	ATOM	1213	N	ARG A 248	10.955	-1.993	-6.806	1.00	9.34	N
10	ATOM	1214	CA	ARG A 248	11.263	-0.611	-7.196	1.00	10.80	C
	ATOM	1215	C	ARG A 248	10.000	0.067	-7.725	1.00	10.45	C
	ATOM	1216	O	ARG A 248	9.688	1.163	-7.285	1.00	8.94	O
	ATOM	1217	CB	ARG A 248	12.402	-0.503	-8.214	1.00	12.72	C
	ATOM	1218	CG A	ARG A 248	12.641	0.928	-8.699	0.50	12.38	C
15	ATOM	1219	CG B	ARG A 248	12.270	0.660	-9.186	0.50	17.76	C
	ATOM	1220	CD A	ARG A 248	13.730	1.057	-9.756	0.50	15.55	C
	ATOM	1221	CD B	ARG A 248	13.565	0.956	-9.942	0.50	22.28	C
	ATOM	1222	NE A	ARG A 248	13.710	2.362	-10.429	0.50	12.89	N
	ATOM	1223	NE B	ARG A 248	13.843	2.384	-9.730	0.50	25.14	N
20	ATOM	1224	CZ A	ARG A 248	12.903	2.720	-11.413	0.50	14.27	C
	ATOM	1225	CZ B	ARG A 248	15.026	2.886	-9.411	0.50	24.43	C
	ATOM	1226	NH1A	ARG A 248	12.018	1.864	-11.921	0.50	15.68	N
	ATOM	1227	NH1B	ARG A 248	16.065	2.069	-9.294	0.50	27.65	N
	ATOM	1228	NH2A	ARG A 248	12.932	3.945	-11.929	0.50	12.72	N
25	ATOM	1229	NH2B	ARG A 248	15.171	4.186	-9.194	0.50	20.27	N
	ATOM	1230	N	GLU A 249	9.334	-0.560	-8.699	1.00	9.14	N
	ATOM	1231	CA	GLU A 249	8.155	0.007	-9.324	1.00	11.86	C
	ATOM	1232	C	GLU A 249	7.014	0.270	-8.342	1.00	11.04	C
	ATOM	1233	O	GLU A 249	6.338	1.299	-8.404	1.00	9.44	O
30	ATOM	1234	CB	GLU A 249	7.639	-0.907	-10.447	1.00	15.60	C
	ATOM	1235	CG	GLU A 249	6.258	-0.557	-10.968	1.00	26.28	C
	ATOM	1236	CD	GLU A 249	5.399	-1.675	-11.504	1.00	34.08	C
	ATOM	1237	OE1	GLU A 249	5.717	-2.882	-11.348	1.00	36.44	O
	ATOM	1238	OE2	GLU A 249	4.334	-1.373	-12.103	1.00	37.85	O
35	ATOM	1239	N	LEU A 250	6.764	-0.682	-7.457	1.00	8.69	N
	ATOM	1240	CA	LEU A 250	5.690	-0.555	-6.480	1.00	8.28	C
	ATOM	1241	C	LEU A 250	6.018	0.439	-5.377	1.00	10.64	C
	ATOM	1242	O	LEU A 250	5.113	1.137	-4.916	1.00	10.39	O
	ATOM	1243	CB	LEU A 250	5.318	-1.931	-5.922	1.00	11.06	C
40	ATOM	1244	CG	LEU A 250	4.659	-2.872	-6.942	1.00	9.15	C
	ATOM	1245	CD1	LEU A 250	4.275	-4.171	-6.250	1.00	6.98	C
	ATOM	1246	CD2	LEU A 250	3.457	-2.211	-7.617	1.00	6.07	C
	ATOM	1247	N	THR A 251	7.293	0.585	-5.017	1.00	8.51	N
	ATOM	1248	CA	THR A 251	7.668	1.608	-4.035	1.00	7.50	C
45	ATOM	1249	C	THR A 251	7.401	2.978	-4.660	1.00	7.68	C
	ATOM	1250	O	THR A 251	6.779	3.872	-4.055	1.00	8.26	O
	ATOM	1251	CB	THR A 251	9.146	1.452	-3.629	1.00	8.52	C
	ATOM	1252	OG1	THR A 251	9.332	0.179	-2.992	1.00	10.75	O
	ATOM	1253	CG2	THR A 251	9.555	2.553	-2.655	1.00	4.33	C
50	ATOM	1254	N	ILE A 252	7.818	3.173	-5.907	1.00	7.33	N
	ATOM	1255	CA	ILE A 252	7.574	4.449	-6.601	1.00	8.12	C
	ATOM	1256	C	ILE A 252	6.080	4.720	-6.667	1.00	9.23	C
	ATOM	1257	O	ILE A 252	5.616	5.821	-6.332	1.00	9.66	O
	ATOM	1258	CB	ILE A 252	8.260	4.512	-7.979	1.00	8.41	C
55	ATOM	1259	CG1	ILE A 252	9.776	4.518	-7.776	1.00	5.97	C
	ATOM	1260	CG2	ILE A 252	7.819	5.776	-8.726	1.00	6.79	C
	ATOM	1261	CD1	ILE A 252	10.655	4.280	-8.990	1.00	6.68	C
	ATOM	1262	N	TYR A 253	5.291	3.723	-7.045	1.00	10.43	N
	ATOM	1263	CA	TYR A 253	3.842	3.829	-7.063	1.00	10.43	C
60	ATOM	1264	C	TYR A 253	3.309	4.297	-5.716	1.00	10.13	C
	ATOM	1265	O	TYR A 253	2.536	5.241	-5.660	1.00	9.33	O
	ATOM	1266	CB	TYR A 253	3.209	2.467	-7.421	1.00	9.73	C
	ATOM	1267	CG	TYR A 253	1.724	2.557	-7.706	1.00	11.41	C
	ATOM	1268	CD1	TYR A 253	1.269	3.034	-8.937	1.00	12.68	C
65	ATOM	1269	CD2	TYR A 253	0.792	2.164	-6.755	1.00	8.44	C
	ATOM	1270	CE1	TYR A 253	-0.094	3.112	-9.195	1.00	11.16	C
	ATOM	1271	CE2	TYR A 253	-0.571	2.232	-7.008	1.00	8.64	C
	ATOM	1272	CZ	TYR A 253	-0.994	2.699	-8.245	1.00	11.35	C
	ATOM	1273	OH	TYR A 253	-2.341	2.787	-8.502	1.00	11.75	O
70	ATOM	1274	N	ALA A 254	3.717	3.682	-4.614	1.00	8.28	N
	ATOM	1275	CA	ALA A 254	3.283	4.028	-3.275	1.00	7.14	C
	ATOM	1276	C	ALA A 254	3.718	5.439	-2.900	1.00	8.13	C

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        ATOM   1277  O    ALA A 254     2.916   6.216  -2.381  1.00  7.26        O
        ATOM   1278  CB   ALA A 254     3.864   3.041  -2.265  1.00 11.06        C
        ATOM   1279  N    LEU A 255     4.971   5.802  -3.195  1.00  7.07        N
        ATOM   1280  CA   LEU A 255     5.439   7.156  -2.874  1.00  6.68        C
  5     ATOM   1281  C    LEU A 255     4.602   8.225  -3.576  1.00  9.25        C
        ATOM   1282  O    LEU A 255     4.363   9.299  -3.015  1.00  8.62        O
        ATOM   1283  CB   LEU A 255     6.916   7.283  -3.245  1.00  8.51        C
        ATOM   1284  CG   LEU A 255     7.906   6.351  -2.519  1.00  6.84        C
        ATOM   1285  CD1  LEU A 255     9.335   6.656  -2.942  1.00  9.42        C
 10     ATOM   1286  CD2  LEU A 255     7.832   6.506  -1.008  1.00  5.35        C
        ATOM   1287  N    LYS A 256     4.247   8.010  -4.847  1.00  6.95        N
        ATOM   1288  CA   LYS A 256     3.397   9.002  -5.523  1.00  9.07        C
        ATOM   1289  C    LYS A 256     1.946   8.953  -5.105  1.00  9.44        C
        ATOM   1290  O    LYS A 256     1.285  10.005  -4.937  1.00  7.99        O
 15     ATOM   1291  CB   LYS A 256     3.519   8.828  -7.051  1.00  9.73        C
        ATOM   1292  CG   LYS A 256     4.942   9.110  -7.521  1.00 11.89        C
        ATOM   1293  CD   LYS A 256     5.192   8.569  -8.919  1.00 20.28        C
        ATOM   1294  CE   LYS A 256     4.745   9.547  -9.986  1.00 24.47        C
        ATOM   1295  NZ   LYS A 256     5.634   9.467 -11.186  1.00 26.97        N
 20     ATOM   1296  N    GLN A 257     1.329   7.775  -4.920  1.00 10.04        N
        ATOM   1297  CA   GLN A 257    -0.096   7.720  -4.550  1.00 10.34        C
        ATOM   1298  C    GLN A 257    -0.391   8.176  -3.129  1.00 11.61        C
        ATOM   1299  O    GLN A 257    -1.497   8.611  -2.839  1.00  9.42        O
        ATOM   1300  CB   GLN A 257    -0.566   6.279  -4.767  1.00 12.04        C
 25     ATOM   1301  CG   GLN A 257    -0.662   5.908  -6.251  1.00 14.99        C
        ATOM   1302  CD   GLN A 257    -1.847   6.614  -6.908  1.00 18.94        C
        ATOM   1303  OE1  GLN A 257    -3.002   6.344  -6.559  1.00 24.20        O
        ATOM   1304  NE2  GLN A 257    -1.532   7.503  -7.813  1.00 21.56        N
        ATOM   1305  N    LEU A 258     0.652   8.046  -2.285  1.00  8.27        N
 30     ATOM   1306  CA   LEU A 258     0.472   8.455  -0.883  1.00  9.74        C
        ATOM   1307  C    LEU A 258     1.091   9.816  -0.603  1.00  7.64        C
        ATOM   1308  O    LEU A 258     1.143  10.255   0.547  1.00  7.79        O
        ATOM   1309  CB   LEU A 258     0.984   7.399   0.098  1.00  7.61        C
        ATOM   1310  CG   LEU A 258     0.386   5.990  -0.168  1.00  7.82        C
 35     ATOM   1311  CD1  LEU A 258     0.997   5.000   0.800  1.00  8.98        C
        ATOM   1312  CD2  LEU A 258    -1.135   6.032  -0.040  1.00  6.93        C
        ATOM   1313  N    ASP A 259     1.437  10.543  -1.660  1.00  9.21        N
        ATOM   1314  CA   ASP A 259     1.980  11.894  -1.564  1.00  9.04        C
        ATOM   1315  C    ASP A 259     0.809  12.868  -1.385  1.00  9.52        C
 40     ATOM   1316  O    ASP A 259     0.303  13.450  -2.340  1.00  8.58        O
        ATOM   1317  CB   ASP A 259     2.768  12.227  -2.832  1.00  8.93        C
        ATOM   1318  CG   ASP A 259     3.337  13.635  -2.841  1.00 11.25        C
        ATOM   1319  OD1  ASP A 259     3.548  14.222  -1.757  1.00  8.51        O
        ATOM   1320  OD2  ASP A 259     3.597  14.170  -3.940  1.00  6.70        O
 45     ATOM   1321  N    LEU A 260     0.351  12.990  -0.147  1.00  8.63        N
        ATOM   1322  CA   LEU A 260    -0.790  13.836   0.201  1.00  8.38        C
        ATOM   1323  C    LEU A 260    -0.343  14.900   1.191  1.00  6.27        C
        ATOM   1324  O    LEU A 260     0.561  14.654   1.982  1.00  7.26        O
        ATOM   1325  CB   LEU A 260    -1.854  12.950   0.855  1.00  6.89        C
 50     ATOM   1326  CG   LEU A 260    -2.359  11.781  -0.005  1.00  4.65        C
        ATOM   1327  CD1  LEU A 260    -3.267  10.858   0.805  1.00  7.42        C
        ATOM   1328  CD2  LEU A 260    -3.133  12.333  -1.200  1.00  9.69        C
        ATOM   1329  N    PRO A 261    -0.949  16.078   1.156  1.00  8.32        N
        ATOM   1330  CA   PRO A 261    -0.548  17.206   1.974  1.00  8.79        C
 55     ATOM   1331  C    PRO A 261    -0.417  16.955   3.463  1.00  7.80        C
        ATOM   1332  O    PRO A 261     0.421  17.587   4.112  1.00  7.02        O
        ATOM   1333  CB   PRO A 261    -1.664  18.235   1.687  1.00  8.92        C
        ATOM   1334  CG   PRO A 261    -1.893  17.995   0.216  1.00 11.25        C
        ATOM   1335  CD   PRO A 261    -1.933  16.474   0.102  1.00  7.59        C
 60     ATOM   1336  N    HIS A 262    -1.221  16.080   4.059  1.00  6.58        N
        ATOM   1337  CA   HIS A 262    -1.175  15.789   5.475  1.00  7.08        C
        ATOM   1338  C    HIS A 262    -0.362  14.555   5.842  1.00  8.37        C
        ATOM   1339  O    HIS A 262    -0.404  14.132   7.007  1.00  8.87        O
        ATOM   1340  CB   HIS A 262    -2.606  15.587   6.014  1.00  6.94        C
 65     ATOM   1341  CG   HIS A 262    -3.300  14.397   5.408  1.00  7.70        C
        ATOM   1342  ND1  HIS A 262    -3.671  14.326   4.078  1.00  9.51        N
        ATOM   1343  CD2  HIS A 262    -3.715  13.238   5.983  1.00  8.94        C
        ATOM   1344  CE1  HIS A 262    -4.272  13.170   3.862  1.00  7.83        C
        ATOM   1345  NE2  HIS A 262    -4.350  12.500   5.011  1.00  7.29        N
 70     ATOM   1346  N    VAL A 263     0.373  13.988   4.901  1.00  8.17        N
        ATOM   1347  CA   VAL A 263     1.167  12.796   5.115  1.00  7.47        C
        ATOM   1348  C    VAL A 263     2.671  13.092   5.100  1.00 10.21        C
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	ATOM	1349	O	VAL	A	263	3.141	13.969	4.381	1.00	7.85		O
	ATOM	1350	CB	VAL	A	263	0.883	11.756	4.004	1.00	7.89		C
	ATOM	1351	CG1	VAL	A	263	1.834	10.579	4.025	1.00	7.91		C
	ATOM	1352	CG2	VAL	A	263	-0.548	11.206	4.113	1.00	6.51		C
5	ATOM	1353	N	ALA	A	264	3.434	12.300	5.848	1.00	6.28		N
	ATOM	1354	CA	ALA	A	264	4.872	12.311	5.829	1.00	6.81		C
	ATOM	1355	C	ALA	A	264	5.278	10.833	5.635	1.00	7.80		C
	ATOM	1356	O	ALA	A	264	4.767	9.998	6.380	1.00	10.65		O
	ATOM	1357	CB	ALA	A	264	5.544	12.819	7.089	1.00	6.72		C
10	ATOM	1358	N	MET	A	265	6.148	10.541	4.691	1.00	5.71		N
	ATOM	1359	CA	MET	A	265	6.595	9.167	4.502	1.00	7.12		C
	ATOM	1360	C	MET	A	265	8.090	8.992	4.768	1.00	8.32		C
	ATOM	1361	O	MET	A	265	8.894	9.841	4.397	1.00	9.40		O
	ATOM	1362	CB	MET	A	265	6.352	8.707	3.058	1.00	7.47		C
15	ATOM	1363	CG	MET	A	265	4.936	8.211	2.771	1.00	7.41		C
	ATOM	1364	SD	MET	A	265	4.708	7.866	1.001	1.00	5.91		S
	ATOM	1365	CE	MET	A	265	4.504	9.530	0.382	1.00	6.40		.C
	ATOM	1366	N	TYR	A	266	8.448	7.873	5.397	1.00	5.61		N
	ATOM	1367	CA	TYR	A	266	9.823	7.463	5.616	1.00	6.24		C
20	ATOM	1368	C	TYR	A	266	10.029	6.067	5.014	1.00	5.80		C
	ATOM	1369	O	TYR	A	266	9.327	5.139	5.424	1.00	5.17		O
	ATOM	1370	CB	TYR	A	266	10.158	7.399	7.111	1.00	7.31		C
	ATOM	1371	CG	TYR	A	266	10.084	8.745	7.806	1.00	6.53		C
	ATOM	1372	CD1	TYR	A	266	8.850	9.207	8.285	1.00	5.70		C
25	ATOM	1373	CD2	TYR	A	266	11.194	9.556	7.963	1.00	6.84		C
	ATOM	1374	CE1	TYR	A	266	8.770	10.426	8.920	1.00	9.26		C
	ATOM	1375	CE2	TYR	A	266	11.090	10.785	8.587	1.00	6.80		C
	ATOM	1376	CZ	TYR	A	266	9.879	11.226	9.065	1.00	8.64		C
	ATOM	1377	OH	TYR	A	266	9.765	12.463	9.705	1.00	5.96		O
30	ATOM	1378	N	MET	A	267	10.904	5.915	4.037	1.00	4.22		N
	ATOM	1379	CA	MET	A	267	11.160	4.616	3.435	1.00	6.69		C
	ATOM	1380	C	MET	A	267	12.027	3.777	4.380	1.00	6.85		C
	ATOM	1381	O	MET	A	267	12.956	4.352	4.958	1.00	4.90		O
	ATOM	1382	CB	MET	A	267	11.906	4.723	2.104	1.00	5.80		C
35	ATOM	1383	CG	MET	A	267	10.954	5.071	0.954	1.00	7.99		C
	ATOM	1384	SD	MET	A	267	11.836	5.079	-0.611	1.00	7.34		S
	ATOM	1385	CE	MET	A	267	12.686	6.662	-0.482	1.00	8.84		C
	ATOM	1386	N	ASP	A	268	11.734	2.482	4.507	1.00	6.17		N
	ATOM	1387	CA	ASP	A	268	12.610	1.695	5.385	1.00	7.93		C
40	ATOM	1388	C	ASP	A	268	14.036	1.684	4.838	1.00	7.64		C
	ATOM	1389	O	ASP	A	268	14.190	1.558	3.614	1.00	5.93		O
	ATOM	1390	CB	ASP	A	268	12.083	0.264	5.496	1.00	5.54		C
	ATOM	1391	CG	ASP	A	268	12.981	-0.619	6.339	1.00	7.42		C
	ATOM	1392	OD1	ASP	A	268	12.758	-0.686	7.564	1.00	9.31		O
45	ATOM	1393	OD2	ASP	A	268	13.881	-1.266	5.750	1.00	7.67		O
	ATOM	1394	N	ALA	A	269	15.032	1.753	5.719	1.00	7.13		N
	ATOM	1395	CA	ALA	A	269	16.425	1.690	5.259	1.00	8.60		C
	ATOM	1396	C	ALA	A	269	17.255	0.747	6.135	1.00	7.36		C
	ATOM	1397	O	ALA	A	269	18.388	1.083	6.518	1.00	7.20		O
50	ATOM	1398	CB	ALA	A	269	17.057	3.077	5.267	1.00	10.76		C
	ATOM	1399	N	GLY	A	270	16.717	-0.438	6.431	1.00	7.15		N
	ATOM	1400	CA	GLY	A	270	17.431	-1.438	7.225	1.00	6.15		C
	ATOM	1401	C	GLY	A	270	17.936	-0.885	8.555	1.00	8.83		C
	ATOM	1402	O	GLY	A	270	17.253	-0.126	9.235	1.00	7.05		O
55	ATOM	1403	N	HIS	A	271	19.154	-1.275	8.945	1.00	8.31		N
	ATOM	1404	CA	HIS	A	271	19.752	-0.807	10.197	1.00	8.40		C
	ATOM	1405	C	HIS	A	271	21.274	-0.845	10.079	1.00	8.58		C
	ATOM	1406	O	HIS	A	271	21.839	-1.232	9.040	1.00	10.19		O
	ATOM	1407	CB	HIS	A	271	19.265	-1.626	11.398	1.00	5.83		C
60	ATOM	1408	CG	HIS	A	271	19.612	-3.088	11.325	1.00	7.27		C
	ATOM	1409	ND1	HIS	A	271	20.778	-3.599	11.881	1.00	7.14		N
	ATOM	1410	CD2	HIS	A	271	18.970	-4.128	10.742	1.00	8.91		C
	ATOM	1411	CE1	HIS	A	271	20.810	-4.900	11.669	1.00	8.80		C
	ATOM	1412	NE2	HIS	A	271	19.745	-5.248	10.957	1.00	9.04		N
65	ATOM	1413	N	ALA	A	272	21.972	-0.383	11.116	1.00	7.51		N
	ATOM	1414	CA	ALA	A	272	23.421	-0.288	11.084	1.00	8.94		C
	ATOM	1415	C	ALA	A	272	24.116	-1.596	10.753	1.00	10.29		C
	ATOM	1416	O	ALA	A	272	25.148	-1.579	10.067	1.00	11.43		O
	ATOM	1417	CB	ALA	A	272	23.957	0.267	12.411	1.00	8.86		C
70	ATOM	1418	N	GLY	A	273	23.604	-2.730	11.211	1.00	9.19		N
	ATOM	1419	CA	GLY	A	273	24.165	-4.035	10.965	1.00	8.84		C
	ATOM	1420	C	GLY	A	273	23.765	-4.618	9.629	1.00	8.39		C

	ATOM	1421	O	GLY	A	273	24.143	-5.758	9.351	1.00 12.18	O
	ATOM	1422	N	TRP	A	274	23.008	-3.903	8.803	1.00 8.78	N
	ATOM	1423	CA	TRP	A	274	22.622	-4.344	7.476	1.00 11.33	C
	ATOM	1424	C	TRP	A	274	23.290	-3.410	6.459	1.00 11.41	C
5	ATOM	1425	O	TRP	A	274	24.263	-3.765	5.787	1.00 12.00	O
	ATOM	1426	CB	TRP	A	274	21.105	-4.321	7.248	1.00 12.55	C
	ATOM	1427	CG	TRP	A	274	20.574	-4.994	6.020	1.00 12.97	C
	ATOM	1428	CD1	TRP	A	274	21.282	-5.388	4.906	1.00 13.66	C
	ATOM	1429	CD2	TRP	A	274	19.209	-5.365	5.757	1.00 11.08	C
10	ATOM	1430	NE1	TRP	A	274	20.456	-5.975	3.999	1.00 10.98	N
	ATOM	1431	CE2	TRP	A	274	19.169	-5.962	4.488	1.00 11.39	C
	ATOM	1432	CE3	TRP	A	274	18.013	-5.213	6.473	1.00 11.56	C
	ATOM	1433	CZ2	TRP	A	274	17.983	-6.443	3.923	1.00 12.85	C
	ATOM	1434	CZ3	TRP	A	274	16.831	-5.679	5.906	1.00 11.52	C
15	ATOM	1435	CH2	TRP	A	274	16.813	-6.293	4.643	1.00 12.41	C
	ATOM	1436	N	LEU	A	275	22.777	-2.187	6.356	1.00 10.15	N
	ATOM	1437	CA	LEU	A	275	23.304	-1.220	5.404	1.00 9.63	C
	ATOM	1438	C	LEU	A	275	24.376	-0.308	5.960	1.00 7.62	C
	ATOM	1439	O	LEU	A	275	24.967	0.453	5.187	1.00 11.04	O
20	ATOM	1440	CB	LEU	A	275	22.155	-0.353	4.845	1.00 9.26	C
	ATOM	1441	CG	LEU	A	275	20.957	-1.094	4.247	1.00 11.24	C
	ATOM	1442	CD1	LEU	A	275	19.944	-0.099	3.689	1.00 8.62	C
	ATOM	1443	CD2	LEU	A	275	21.391	-2.079	3.162	1.00 13.03	C
	ATOM	1444	N	GLY	A	276	24.670	-0.361	7.248	1.00 9.05	N
25	ATOM	1445	CA	GLY	A	276	25.651	0.545	7.870	1.00 8.53	C
	ATOM	1446	C	GLY	A	276	27.096	0.102	7.676	1.00 9.78	C
	ATOM	1447	O	GLY	A	276	28.020	0.909	7.878	1.00 10.26	O
	ATOM	1448	N	TRP	A	277	27.311	-1.153	7.287	1.00 10.13	N
	ATOM	1449	CA	TRP	A	277	28.700	-1.589	7.017	1.00 11.51	C
30	ATOM	1450	C	TRP	A	277	29.252	-0.645	5.956	1.00 12.13	C
	ATOM	1451	O	TRP	A	277	28.585	-0.383	4.946	1.00 12.84	O
	ATOM	1452	CB	TRP	A	277	28.705	-3.020	6.482	1.00 10.92	C
	ATOM	1453	CG	TRP	A	277	28.246	-4.049	7.479	1.00 12.31	C
	ATOM	1454	CD1	TRP	A	277	26.962	-4.446	7.745	1.00 11.68	C
35	ATOM	1455	CD2	TRP	A	277	29.093	-4.760	8.388	1.00 12.51	C
	ATOM	1456	NE1	TRP	A	277	26.973	-5.383	8.762	1.00 11.14	N
	ATOM	1457	CE2	TRP	A	277	28.263	-5.600	9.163	1.00 11.67	C
	ATOM	1458	CE3	TRP	A	277	30.477	-4.765	8.611	1.00 11.80	C
	ATOM	1459	CZ2	TRP	A	277	28.780	-6.428	10.157	1.00 12.92	C
40	ATOM	1460	CZ3	TRP	A	277	30.991	-5.622	9.581	1.00 14.44	C
	ATOM	1461	CH2	TRP	A	277	30.134	-6.445	10.340	1.00 15.36	C
	ATOM	1462	N	PRO	A	278	30.510	-0.238	6.068	1.00 12.38	N
	ATOM	1463	CA	PRO	A	278	31.102	0.724	5.160	1.00 12.46	C
	ATOM	1464	C	PRO	A	278	30.950	0.422	3.688	1.00 13.57	C
45	ATOM	1465	O	PRO	A	278	30.584	1.328	2.922	1.00 14.10	O
	ATOM	1466	CB	PRO	A	278	32.561	0.774	5.610	1.00 11.83	C
	ATOM	1467	CG	PRO	A	278	32.432	0.638	7.102	1.00 12.89	C
	ATOM	1468	CD	PRO	A	278	31.331	-0.386	7.304	1.00 13.10	C
	ATOM	1469	N	ALA	A	279	31.030	-0.844	3.277	1.00 12.89	N
50	ATOM	1470	CA	ALA	A	279	30.878	-1.223	1.884	1.00 13.58	C
	ATOM	1471	C	ALA	A	279	29.441	-1.111	1.381	1.00 13.99	C
	ATOM	1472	O	ALA	A	279	29.250	-1.084	0.165	1.00 12.43	O
	ATOM	1473	CB	ALA	A	279	31.365	-2.663	1.692	1.00 13.49	C
	ATOM	1474	N	ASN	A	280	28.449	-1.061	2.280	1.00 11.55	N
55	ATOM	1475	CA	ASN	A	280	27.058	-0.991	1.842	1.00 11.36	C
	ATOM	1476	C	ASN	A	280	26.497	0.425	1.836	1.00 12.48	C
	ATOM	1477	O	ASN	A	280	25.510	0.659	1.122	1.00 10.23	O
	ATOM	1478	CB	ASN	A	280	26.155	-1.851	2.742	1.00 10.12	C
	ATOM	1479	CG	ASN	A	280	26.557	-3.316	2.710	1.00 15.79	C
60	ATOM	1480	OD1	ASN	A	280	27.172	-3.773	1.742	1.00 12.50	O
	ATOM	1481	ND2	ASN	A	280	26.213	-4.055	3.761	1.00 12.07	N
	ATOM	1482	N	ILE	A	281	27.174	1.370	2.459	1.00 14.04	N
	ATOM	1483	CA	ILE	A	281	26.693	2.735	2.572	1.00 16.09	C
	ATOM	1484	C	ILE	A	281	26.393	3.442	1.264	1.00 14.58	C
65	ATOM	1485	O	ILE	A	281	25.332	4.030	1.060	1.00 12.07	O
	ATOM	1486	CB	ILE	A	281	27.661	3.651	3.367	1.00 21.92	C
	ATOM	1487	CG1	ILE	A	281	27.963	3.086	4.745	1.00 23.78	C
	ATOM	1488	CG2	ILE	A	281	27.013	5.041	3.496	1.00 22.45	C
	ATOM	1489	CD1	ILE	A	281	27.021	3.472	5.859	1.00 23.17	C
70	ATOM	1490	N	GLN	A	282	27.345	3.471	0.345	1.00 15.72	N
	ATOM	1491	CA	GLN	A	282	27.147	4.169	-0.922	1.00 13.98	C
	ATOM	1492	C	GLN	A	282	26.202	3.541	-1.919	1.00 11.05	C

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     ATOM  1493  O    GLN A 282     25.394   4.239  -2.534  1.00 12.05          O
     ATOM  1494  CB   GLN A 282     28.550   4.314  -1.539  1.00 19.90          C
     ATOM  1495  CG   GLN A 282     28.436   4.984  -2.913  1.00 28.16          C
     ATOM  1496  CD   GLN A 282     29.824   5.146  -3.498  1.00 37.02          C
  5  ATOM  1497  OE1  GLN A 282     30.768   5.539  -2.800  1.00 37.94          O
     ATOM  1498  NE2  GLN A 282     29.968   4.834  -4.783  1.00 37.58          N
     ATOM  1499  N    PRO A 283     26.259   2.224  -2.056  1.00 10.83          N
     ATOM  1500  CA   PRO A 283     25.269   1.531  -2.877  1.00 12.76          C
     ATOM  1501  C    PRO A 283     23.874   1.810  -2.333  1.00 11.45          C
 10  ATOM  1502  O    PRO A 283     22.927   1.999  -3.106  1.00  8.19          O
     ATOM  1503  CB   PRO A 283     25.608   0.051  -2.775  1.00 14.50          C
     ATOM  1504  CG   PRO A 283     26.904  -0.036  -2.068  1.00 13.85          C
     ATOM  1505  CD   PRO A 283     27.298   1.316  -1.551  1.00 11.96          C
     ATOM  1506  N    ALA A 284     23.702   1.803  -1.007  1.00 10.70          N
 15  ATOM  1507  CA   ALA A 284     22.397   2.118  -0.416  1.00 11.63          C
     ATOM  1508  C    ALA A 284     21.986   3.550  -0.728  1.00 10.83          C
     ATOM  1509  O    ALA A 284     20.843   3.894  -1.028  1.00  8.26          O
     ATOM  1510  CB   ALA A 284     22.489   1.945   1.107  1.00  7.27          C
     ATOM  1511  N    ALA A 285     22.968   4.461  -0.610  1.00 11.82          N
 20  ATOM  1512  CA   ALA A 285     22.704   5.880  -0.882  1.00 11.59          C
     ATOM  1513  C    ALA A 285     22.330   6.073  -2.341  1.00 11.08          C
     ATOM  1514  O    ALA A 285     21.407   6.822  -2.662  1.00  7.85          O
     ATOM  1515  CB   ALA A 285     23.912   6.727  -0.496  1.00  9.98          C
     ATOM  1516  N    GLU A 286     23.026   5.375  -3.240  1.00 11.14          N
 25  ATOM  1517  CA   GLU A 286     22.665   5.446  -4.662  1.00 12.08          C
     ATOM  1518  C    GLU A 286     21.250   4.935  -4.903  1.00 13.20          C
     ATOM  1519  O    GLU A 286     20.436   5.589  -5.573  1.00 10.15          O
     ATOM  1520  CB   GLU A 286     23.676   4.661  -5.491  1.00 16.73          C
     ATOM  1521  CG   GLU A 286     25.013   5.366  -5.630  1.00 24.97          C
 30  ATOM  1522  CD   GLU A 286     26.147   4.424  -5.977  1.00 30.68          C
     ATOM  1523  OE1  GLU A 286     26.008   3.197  -5.761  1.00 35.88          O
     ATOM  1524  OE2  GLU A 286     27.184   4.909  -6.458  1.00 29.85          O
     ATOM  1525  N    LEU A 287     20.923   3.784  -4.325  1.00 11.82          N
     ATOM  1526  CA   LEU A 287     19.576   3.241  -4.501  1.00 11.32          C
 35  ATOM  1527  C    LEU A 287     18.470   4.140  -3.981  1.00 10.45          C
     ATOM  1528  O    LEU A 287     17.530   4.425  -4.745  1.00 10.62          O
     ATOM  1529  CB   LEU A 287     19.493   1.861  -3.836  1.00 14.87          C
     ATOM  1530  CG   LEU A 287     18.094   1.222  -3.820  1.00 17.45          C
     ATOM  1531  CD1  LEU A 287     17.700   0.818  -5.235  1.00 22.29          C
 40  ATOM  1532  CD2  LEU A 287     18.098   0.011  -2.897  1.00 18.87          C
     ATOM  1533  N    PHE A 288     18.537   4.602  -2.730  1.00  7.31          N
     ATOM  1534  CA   PHE A 288     17.460   5.404  -2.172  1.00  7.68          C
     ATOM  1535  C    PHE A 288     17.338   6.775  -2.818  1.00  9.78          C
     ATOM  1536  O    PHE A 288     16.219   7.265  -3.024  1.00  7.80          O
 45  ATOM  1537  CB   PHE A 288     17.533   5.508  -0.641  1.00  6.27          C
     ATOM  1538  CG   PHE A 288     17.152   4.214   0.034  1.00  8.96          C
     ATOM  1539  CD1  PHE A 288     15.825   3.831   0.127  1.00  9.32          C
     ATOM  1540  CD2  PHE A 288     18.136   3.384   0.551  1.00  8.51          C
     ATOM  1541  CE1  PHE A 288     15.464   2.628   0.706  1.00 10.48          C
 50  ATOM  1542  CE2  PHE A 288     17.782   2.176   1.146  1.00 10.59          C
     ATOM  1543  CZ   PHE A 288     16.445   1.800   1.229  1.00  9.25          C
     ATOM  1544  N    ALA A 289     18.475   7.408  -3.144  1.00 10.79          N
     ATOM  1545  CA   ALA A 289     18.396   8.721  -3.771  1.00 11.58          C
     ATOM  1546  C    ALA A 289     17.815   8.612  -5.180  1.00 11.29          C
 55  ATOM  1547  O    ALA A 289     17.094   9.523  -5.595  1.00 10.16          O
     ATOM  1548  CB   ALA A 289     19.740   9.434  -3.836  1.00  9.82          C
     ATOM  1549  N    LYS A 290     18.100   7.518  -5.886  1.00 10.82          N
     ATOM  1550  CA   LYS A 290     17.570   7.400  -7.248  1.00 14.48          C
     ATOM  1551  C    LYS A 290     16.070   7.118  -7.243  1.00 12.08          C
 60  ATOM  1552  O    LYS A 290     15.310   7.642  -8.055  1.00 10.89          O
     ATOM  1553  CB   LYS A 290     18.353   6.355  -8.041  1.00 15.13          C
     ATOM  1554  CG   LYS A 290     17.902   6.210  -9.483  1.00 22.86          C
     ATOM  1555  CD   LYS A 290     17.873   7.530 -10.229  1.00 28.98          C
     ATOM  1556  CE   LYS A 290     19.178   7.771 -10.978  1.00 35.23          C
 65  ATOM  1557  NZ   LYS A 290     19.255   6.883 -12.180  1.00 38.20          N
     ATOM  1558  N    ILE A 291     15.603   6.316  -6.299  1.00 11.63          N
     ATOM  1559  CA   ILE A 291     14.168   6.055  -6.145  1.00 10.44          C
     ATOM  1560  C    ILE A 291     13.491   7.404  -5.897  1.00 10.20          C
     ATOM  1561  O    ILE A 291     12.464   7.731  -6.479  1.00 11.65          O
 70  ATOM  1562  CB   ILE A 291     13.914   5.148  -4.917  1.00 13.66          C
     ATOM  1563  CG1  ILE A 291     14.364   3.716  -5.209  1.00 16.69          C
     ATOM  1564  CG2  ILE A 291     12.462   5.192  -4.433  1.00 13.26          C
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	ATOM	1565	CD1	ILE	A	291	13.457	2.919	-6.109	1.00	19.35	C
	ATOM	1566	N	TYR	A	292	14.019	8.162	-4.933	1.00	8.98	N
	ATOM	1567	CA	TYR	A	292	13.464	9.478	-4.595	1.00	9.51	C
	ATOM	1568	C	TYR	A	292	13.333	10.357	-5.838	1.00	6.92	C
5	ATOM	1569	O	TYR	A	292	12.310	11.002	-6.091	1.00	9.77	O
	ATOM	1570	CB	TYR	A	292	14.367	10.154	-3.562	1.00	8.38	C
	ATOM	1571	CG	TYR	A	292	13.950	11.518	-3.064	1.00	10.61	C
	ATOM	1572	CD1	TYR	A	292	12.766	11.693	-2.364	1.00	12.16	C
	ATOM	1573	CD2	TYR	A	292	14.750	12.633	-3.283	1.00	10.96	C
10	ATOM	1574	CE1	TYR	A	292	12.378	12.940	-1.896	1.00	12.18	C
	ATOM	1575	CE2	TYR	A	292	14.378	13.887	-2.821	1.00	11.86	C
	ATOM	1576	CZ	TYR	A	292	13.198	14.032	-2.132	1.00	13.20	C
	ATOM	1577	OH	TYR	A	292	12.811	15.270	-1.664	1.00	14.21	O
	ATOM	1578	N	GLU	A	293	14.403	10.437	-6.624	1.00	9.98	N
15	ATOM	1579	CA	GLU	A	293	14.409	11.220	-7.846	1.00	11.16	C
	ATOM	1580	C	GLU	A	293	13.405	10.676	-8.852	1.00	12.04	C
	ATOM	1581	O	GLU	A	293	12.650	11.440	-9.456	1.00	11.19	O
	ATOM	1582	CB	GLU	A	293	15.788	11.173	-8.526	1.00	14.97	C
	ATOM	1583	CG	GLU	A	293	16.736	12.189	-7.935	1.00	30.37	C
20	ATOM	1584	CD	GLU	A	293	18.049	12.319	-8.680	1.00	36.86	C
	ATOM	1585	OE1	GLU	A	293	18.304	11.559	-9.640	1.00	37.27	O
	ATOM	1586	OE2	GLU	A	293	18.814	13.216	-8.257	1.00	42.21	O
	ATOM	1587	N	ASP	A	294	13.438	9.358	-9.058	1.00	9.56	N
	ATOM	1588	CA	ASP	A	294	12.526	8.733	-10.008	1.00	11.87	C
25	ATOM	1589	C	ASP	A	294	11.066	8.888	-9.617	1.00	13.02	C
	ATOM	1590	O	ASP	A	294	10.217	8.854	-10.513	1.00	12.14	O
	ATOM	1591	CB	ASP	A	294	12.871	7.246	-10.191	1.00	12.24	C
	ATOM	1592	CG	ASP	A	294	14.145	7.070	-11.000	1.00	17.67	C
	ATOM	1593	OD1	ASP	A	294	14.688	8.063	-11.519	1.00	16.93	O
30	ATOM	1594	OD2	ASP	A	294	14.642	5.938	-11.142	1.00	15.94	O
	ATOM	1595	N	ALA	A	295	10.717	9.051	-8.345	1.00	10.18	N
	ATOM	1596	CA	ALA	A	295	9.347	9.285	-7.937	1.00	8.76	C
	ATOM	1597	C	ALA	A	295	8.963	10.770	-8.046	1.00	10.32	C
	ATOM	1598	O	ALA	A	295	7.851	11.106	-7.668	1.00	9.41	O
35	ATOM	1599	CB	ALA	A	295	9.076	8.870	-6.486	1.00	8.68	C
	ATOM	1600	N	GLY	A	296	9.836	11.646	-8.520	1.00	11.57	N
	ATOM	1601	CA	GLY	A	296	9.560	13.062	-8.635	1.00	14.12	C
	ATOM	1602	C	GLY	A	296	9.834	13.856	-7.366	1.00	12.59	C
	ATOM	1603	O	GLY	A	296	9.264	14.933	-7.181	1.00	11.99	O
40	ATOM	1604	N	LYS	A	297	10.600	13.324	-6.420	1.00	10.82	N
	ATOM	1605	CA	LYS	A	297	10.841	13.965	-5.127	1.00	11.02	C
	ATOM	1606	C	LYS	A	297	9.526	14.469	-4.539	1.00	12.69	C
	ATOM	1607	O	LYS	A	297	9.265	15.657	-4.383	1.00	12.46	O
	ATOM	1608	CB	LYS	A	297	11.841	15.117	-5.341	1.00	14.05	C
45	ATOM	1609	CG	LYS	A	297	13.137	14.611	-5.968	1.00	13.27	C
	ATOM	1610	CD	LYS	A	297	14.250	15.649	-5.839	1.00	17.64	C
	ATOM	1611	CE	LYS	A	297	15.526	15.116	-6.478	1.00	19.52	C
	ATOM	1612	NZ	LYS	A	297	16.686	15.962	-6.079	1.00	24.20	N
	ATOM	1613	N	PRO	A	298	8.610	13.543	-4.246	1.00	10.53	N
50	ATOM	1614	CA	PRO	A	298	7.309	13.872	-3.716	1.00	8.33	C
	ATOM	1615	C	PRO	A	298	7.437	14.688	-2.437	1.00	8.91	C
	ATOM	1616	O	PRO	A	298	8.278	14.375	-1.593	1.00	7.49	O
	ATOM	1617	CB	PRO	A	298	6.638	12.524	-3.473	1.00	9.86	C
	ATOM	1618	CG	PRO	A	298	7.441	11.519	-4.231	1.00	8.01	C
55	ATOM	1619	CD	PRO	A	298	8.839	12.070	-4.376	1.00	8.83	C
	ATOM	1620	N	ARG	A	299	6.596	15.702	-2.263	1.00	8.72	N
	ATOM	1621	CA	ARG	A	299	6.714	16.557	-1.064	1.00	9.08	C
	ATOM	1622	C	ARG	A	299	6.626	15.776	0.235	1.00	8.93	C
	ATOM	1623	O	ARG	A	299	7.398	15.987	1.168	1.00	7.66	O
60	ATOM	1624	CB	ARG	A	299	5.608	17.621	-1.085	1.00	8.46	C
	ATOM	1625	CG	ARG	A	299	5.631	18.563	0.113	1.00	10.62	C
	ATOM	1626	CD	ARG	A	299	4.202	18.995	0.464	1.00	13.20	C
	ATOM	1627	NE	ARG	A	299	3.458	17.838	0.979	1.00	10.71	N
	ATOM	1628	CZ	ARG	A	299	3.692	17.217	2.136	1.00	11.86	C
65	ATOM	1629	NH1	ARG	A	299	4.634	17.638	2.980	1.00	8.47	N
	ATOM	1630	NH2	ARG	A	299	2.939	16.156	2.399	1.00	9.13	N
	ATOM	1631	N	ALA	A	300	5.736	14.781	0.285	1.00	7.86	N
	ATOM	1632	CA	ALA	A	300	5.493	13.978	1.469	1.00	7.80	C
	ATOM	1633	C	ALA	A	300	6.624	13.039	1.855	1.00	8.97	C
70	ATOM	1634	O	ALA	A	300	6.635	12.577	3.019	1.00	9.64	O
	ATOM	1635	CB	ALA	A	300	4.221	13.133	1.229	1.00	6.82	C
	ATOM	1636	N	VAL	A	301	7.549	12.776	0.934	1.00	5.06	N

	ATOM	1637	CA	VAL	A	301	8.688	11.902	1.247	1.00	9.62	C
	ATOM	1638	C	VAL	A	301	9.691	12.699	2.086	1.00	11.03	C
	ATOM	1639	O	VAL	A	301	10.416	13.568	1.583	1.00	11.13	O
	ATOM	1640	CB	VAL	A	301	9.361	11.291	0.018	1.00	9.77	C
5	ATOM	1641	CG1	VAL	A	301	10.522	10.378	0.420	1.00	11.10	C
	ATOM	1642	CG2	VAL	A	301	8.333	10.444	-0.751	1.00	8.91	C
	ATOM	1643	N	ARG	A	302	9.680	12.393	3.376	1.00	8.40	N
	ATOM	1644	CA	ARG	A	302	10.495	13.108	4.350	1.00	10.39	C
	ATOM	1645	C	ARG	A	302	11.868	12.486	4.530	1.00	9.44	C
10	ATOM	1646	O	ARG	A	302	12.856	13.182	4.763	1.00	6.90	O
	ATOM	1647	CB	ARG	A	302	9.706	13.168	5.659	1.00	12.00	C
	ATOM	1648	CG	ARG	A	302	10.384	13.914	6.786	1.00	13.82	C
	ATOM	1649	CD	ARG	A	302	10.666	15.391	6.484	1.00	13.53	C
	ATOM	1650	NE	ARG	A	302	11.305	16.005	7.659	1.00	11.16	N
15	ATOM	1651	CZ	ARG	A	302	11.618	17.286	7.764	1.00	14.08	C
	ATOM	1652	NH1	ARG	A	302	11.400	18.142	6.771	1.00	12.81	N
	ATOM	1653	NH2	ARG	A	302	12.171	17.743	8.888	1.00	11.84	N
	ATOM	1654	N	GLY	A	303	11.992	11.171	4.283	1.00	8.63	N
	ATOM	1655	CA	GLY	A	303	13.325	10.562	4.407	1.00	8.56	C
20	ATOM	1656	C	GLY	A	303	13.220	9.072	4.674	1.00	6.34	C
	ATOM	1657	O	GLY	A	303	12.510	8.373	3.944	1.00	5.44	O
	ATOM	1658	N	LEU	A	304	13.973	8.573	5.641	1.00	8.57	N
	ATOM	1659	CA	LEU	A	304	14.121	7.127	5.836	1.00	5.76	C
	ATOM	1660	C	LEU	A	304	13.901	6.720	7.283	1.00	6.88	C
25	ATOM	1661	O	LEU	A	304	14.114	7.560	8.154	1.00	6.28	O
	ATOM	1662	CB	LEU	A	304	15.557	6.752	5.431	1.00	9.81	C
	ATOM	1663	CG	LEU	A	304	15.996	7.063	3.989	1.00	7.82	C
	ATOM	1664	CD1	LEU	A	304	17.465	6.694	3.808	1.00	11.27	C
	ATOM	1665	CD2	LEU	A	304	15.109	6.295	3.008	1.00	6.00	C
30	ATOM	1666	N	ALA	A	305	13.551	5.451	7.512	1.00	6.26	N
	ATOM	1667	CA	ALA	A	305	13.395	4.934	8.864	1.00	7.52	C
	ATOM	1668	C	ALA	A	305	14.415	3.815	9.084	1.00	8.92	C
	ATOM	1669	O	ALA	A	305	14.677	3.045	8.155	1.00	8.95	O
	ATOM	1670	CB	ALA	A	305	12.015	4.342	9.091	1.00	5.11	C
35	ATOM	1671	N	THR	A	306	15.050	3.768	10.252	1.00	7.71	N
	ATOM	1672	CA	THR	A	306	16.025	2.728	10.517	1.00	6.41	C
	ATOM	1673	C	THR	A	306	15.738	1.990	11.826	1.00	6.71	C
	ATOM	1674	O	THR	A	306	15.011	2.441	12.714	1.00	5.64	O
	ATOM	1675	CB	THR	A	306	17.491	3.219	10.550	1.00	8.52	C
40	ATOM	1676	OG1	THR	A	306	17.728	3.932	11.767	1.00	8.64	O
	ATOM	1677	CG2	THR	A	306	17.824	4.120	9.367	1.00	7.21	C
	ATOM	1678	N	ASN	A	307	16.347	0.807	11.914	1.00	6.96	N
	ATOM	1679	CA	ASN	A	307	16.252	-0.111	13.042	1.00	7.89	C
	ATOM	1680	C	ASN	A	307	14.853	-0.649	13.282	1.00	9.11	C
45	ATOM	1681	O	ASN	A	307	14.592	-1.152	14.374	1.00	7.66	O
	ATOM	1682	CB	ASN	A	307	16.773	0.571	14.342	1.00	7.51	C
	ATOM	1683	CG	ASN	A	307	17.210	-0.456	15.379	1.00	11.22	C
	ATOM	1684	OD1	ASN	A	307	17.893	-1.433	15.062	1.00	8.51	O
	ATOM	1685	ND2	ASN	A	307	16.797	-0.293	16.640	1.00	12.34	N
50	ATOM	1686	N	VAL	A	308	13.944	-0.583	12.302	1.00	8.35	N
	ATOM	1687	CA	VAL	A	308	12.579	-1.061	12.459	1.00	8.75	C
	ATOM	1688	C	VAL	A	308	12.584	-2.533	12.855	1.00	8.64	C
	ATOM	1689	O	VAL	A	308	13.242	-3.359	12.216	1.00	8.42	O
	ATOM	1690	CB	VAL	A	308	11.740	-0.895	11.170	1.00	6.29	C
55	ATOM	1691	CG1	VAL	A	308	10.350	-1.495	11.336	1.00	7.20	C
	ATOM	1692	CG2	VAL	A	308	11.605	0.588	10.831	1.00	5.27	C
	ATOM	1693	N	ALA	A	309	11.961	-2.861	13.976	1.00	8.32	N
	ATOM	1694	CA	ALA	A	309	11.870	-4.210	14.496	1.00	9.02	C
	ATOM	1695	C	ALA	A	309	13.226	-4.796	14.872	1.00	10.25	C
60	ATOM	1696	O	ALA	A	309	13.294	-5.994	15.155	1.00	12.32	O
	ATOM	1697	CB	ALA	A	309	11.168	-5.146	13.504	1.00	9.76	C
	ATOM	1698	N	ASN	A	310	14.249	-3.970	15.008	1.00	9.63	N
	ATOM	1699	CA	ASN	A	310	15.553	-4.462	15.435	1.00	10.80	C
	ATOM	1700	C	ASN	A	310	15.855	-3.886	16.803	1.00	10.72	C
65	ATOM	1701	O	ASN	A	310	15.000	-3.215	17.384	1.00	11.68	O
	ATOM	1702	CB	ASN	A	310	16.612	-4.161	14.362	1.00	11.11	C
	ATOM	1703	CG	ASN	A	310	16.726	-5.384	13.459	1.00	16.07	C
	ATOM	1704	OD1	ASN	A	310	17.473	-6.305	13.786	1.00	13.72	O
	ATOM	1705	ND2	ASN	A	310	15.920	-5.457	12.399	1.00	16.01	N
70	ATOM	1706	N	TYR	A	311	17.046	-4.168	17.342	1.00	10.84	N
	ATOM	1707	CA	TYR	A	311	17.364	-3.801	18.713	1.00	11.23	C
	ATOM	1708	C	TYR	A	311	18.564	-2.896	18.884	1.00	12.18	C

	ATOM	1709	O	TYR A 311	19.034	-2.763	20.028	1.00	12.23	O
	ATOM	1710	CB	TYR A 311	17.672	-5.122	19.491	1.00	11.01	C
	ATOM	1711	CG	TYR A 311	16.663	-6.219	19.229	1.00	11.75	C
	ATOM	1712	CD1	TYR A 311	15.492	-6.315	19.983	1.00	11.64	C
5	ATOM	1713	CD2	TYR A 311	16.876	-7.136	18.194	1.00	11.12	C
	ATOM	1714	CE1	TYR A 311	14.574	-7.318	19.724	1.00	11.23	C
	ATOM	1715	CE2	TYR A 311	15.943	-8.136	17.939	1.00	11.43	C
	ATOM	1716	CZ	TYR A 311	14.813	-8.219	18.711	1.00	11.12	C
	ATOM	1717	OH	TYR A 311	13.890	-9.224	18.468	1.00	12.16	O
10	ATOM	1718	N	ASN A 312	19.092	-2.337	17.791	1.00	12.04	N
	ATOM	1719	CA	ASN A 312	20.292	-1.527	17.882	1.00	13.38	C
	ATOM	1720	C	ASN A 312	20.155	-0.300	18.764	1.00	12.71	C
	ATOM	1721	O	ASN A 312	19.105	0.324	18.940	1.00	10.84	O
	ATOM	1722	CB	ASN A 312	20.755	-1.051	16.493	1.00	11.78	C
15	ATOM	1723	CG	ASN A 312	21.006	-2.203	15.545	1.00	12.16	C
	ATOM	1724	OD1	ASN A 312	20.933	-3.367	15.926	1.00	12.39	O
	ATOM	1725	ND2	ASN A 312	21.275	-1.906	14.280	1.00	11.61	N
	ATOM	1726	N	ALA A 313	21.308	0.102	19.310	1.00	11.20	N
	ATOM	1727	CA	ALA A 313	21.350	1.317	20.119	1.00	11.45	C
20	ATOM	1728	C	ALA A 313	21.286	2.516	19.167	1.00	12.29	C
	ATOM	1729	O	ALA A 313	21.675	2.380	18.003	1.00	10.46	O
	ATOM	1730	CB	ALA A 313	22.702	1.392	20.835	1.00	10.42	C
	ATOM	1731	N	TRP A 314	20.850	3.644	19.684	1.00	11.45	N
	ATOM	1732	CA	TRP A 314	20.937	4.902	18.966	1.00	14.41	C
25	ATOM	1733	C	TRP A 314	22.418	5.307	19.086	1.00	14.21	C
	ATOM	1734	O	TRP A 314	23.128	5.516	18.113	1.00	10.80	O
	ATOM	1735	CB	TRP A 314	20.037	5.990	19.573	1.00	14.64	C
	ATOM	1736	CG	TRP A 314	20.510	7.386	19.280	1.00	13.52	C
	ATOM	1737	CD1	TRP A 314	20.929	8.314	20.203	1.00	15.05	C
30	ATOM	1738	CD2	TRP A 314	20.688	7.989	18.004	1.00	12.63	C
	ATOM	1739	NE1	TRP A 314	21.329	9.462	19.568	1.00	13.76	N
	ATOM	1740	CE2	TRP A 314	21.210	9.280	18.216	1.00	14.52	C
	ATOM	1741	CE3	TRP A 314	20.456	7.572	16.688	1.00	9.95	C
	ATOM	1742	CZ2	TRP A 314	21.474	10.168	17.169	1.00	12.11	C
35	ATOM	1743	CZ3	TRP A 314	20.733	8.442	15.650	1.00	8.98	C
	ATOM	1744	CH2	TRP A 314	21.237	9.737	15.898	1.00	11.19	C
	ATOM	1745	N	SER A 315	22.912	5.318	20.334	1.00	15.23	N
	ATOM	1746	CA	SER A 315	24.287	5.751	20.548	1.00	18.72	C
	ATOM	1747	C	SER A 315	24.833	5.213	21.867	1.00	21.49	C
40	ATOM	1748	O	SER A 315	24.350	5.586	22.934	1.00	21.81	O
	ATOM	1749	CB	SER A 315	24.377	7.278	20.558	1.00	21.30	C
	ATOM	1750	OG	SER A 315	25.704	7.736	20.802	1.00	21.21	O
	ATOM	1751	N	VAL A 316	25.825	4.351	21.762	1.00	21.34	N
	ATOM	1752	CA	VAL A 316	26.497	3.791	22.932	1.00	22.22	C
45	ATOM	1753	C	VAL A 316	28.002	3.983	22.739	1.00	23.86	C
	ATOM	1754	O	VAL A 316	28.511	3.976	21.622	1.00	19.29	O
	ATOM	1755	CB	VAL A 316	26.173	2.323	23.197	1.00	21.02	C
	ATOM	1756	CG1	VAL A 316	24.794	2.201	23.842	1.00	24.42	C
	ATOM	1757	CG2	VAL A 316	26.265	1.504	21.923	1.00	22.66	C
50	ATOM	1758	N	SER A 317	28.698	4.173	23.854	1.00	25.44	N
	ATOM	1759	CA	SER A 317	30.119	4.470	23.854	1.00	28.10	C
	ATOM	1760	C	SER A 317	30.995	3.307	23.433	1.00	28.90	C
	ATOM	1761	O	SER A 317	32.074	3.513	22.866	1.00	31.11	O
	ATOM	1762	CB	SER A 317	30.491	4.924	25.284	1.00	29.64	C
55	ATOM	1763	OG	SER A 317	30.252	3.803	26.135	1.00	31.24	O
	ATOM	1764	N	SER A 318	30.568	2.083	23.699	1.00	26.74	N
	ATOM	1765	CA	SER A 318	31.332	0.908	23.319	1.00	28.86	C
	ATOM	1766	C	SER A 318	30.525	-0.007	22.400	1.00	26.66	C
	ATOM	1767	O	SER A 318	29.340	-0.241	22.642	1.00	25.50	O
60	ATOM	1768	CB	SER A 318	31.740	0.147	24.590	1.00	32.29	C
	ATOM	1769	OG	SER A 318	32.564	-0.953	24.249	1.00	37.63	O
	ATOM	1770	N	PRO A 319	31.159	-0.537	21.363	1.00	23.88	N
	ATOM	1771	CA	PRO A 319	30.511	-1.437	20.435	1.00	22.82	C
	ATOM	1772	C	PRO A 319	30.168	-2.788	21.027	1.00	22.89	C
65	ATOM	1773	O	PRO A 319	31.012	-3.521	21.559	1.00	21.86	O
	ATOM	1774	CB	PRO A 319	31.514	-1.623	19.300	1.00	24.00	C
	ATOM	1775	CG	PRO A 319	32.806	-1.049	19.750	1.00	23.83	C
	ATOM	1776	CD	PRO A 319	32.578	-0.276	21.014	1.00	24.62	C
	ATOM	1777	N	PRO A 320	28.901	-3.176	20.921	1.00	21.38	N
70	ATOM	1778	CA	PRO A 320	28.458	-4.495	21.378	1.00	20.94	C
	ATOM	1779	C	PRO A 320	29.264	-5.524	20.607	1.00	21.78	C
	ATOM	1780	O	PRO A 320	29.468	-5.395	19.391	1.00	20.52	O

	ATOM	1781	CB	PRO	A	320	26.978	-4.539	21.056	1.00	17.82		C
	ATOM	1782	CG	PRO	A	320	26.572	-3.113	20.877	1.00	19.44		C
	ATOM	1783	CD	PRO	A	320	27.787	-2.408	20.312	1.00	21.26		C
	ATOM	1784	N	PRO	A	321	29.711	-6.577	21.275	1.00	23.19		N
5	ATOM	1785	CA	PRO	A	321	30.559	-7.598	20.681	1.00	21.99		C
	ATOM	1786	C	PRO	A	321	30.047	-8.219	19.403	1.00	20.97		C
	ATOM	1787	O	PRO	A	321	30.853	-8.472	18.487	1.00	18.77		O
	ATOM	1788	CB	PRO	A	321	30.724	-8.655	21.775	1.00	22.93		C
	ATOM	1789	CG	PRO	A	321	30.445	-7.933	23.041	1.00	22.72		C
10	ATOM	1790	CD	PRO	A	321	29.486	-6.814	22.724	1.00	23.19		C
	ATOM	1791	N	TYR	A	322	28.731	-8.433	19.264	1.00	15.16		N
	ATOM	1792	CA	TYR	A	322	28.164	-9.002	18.067	1.00	13.57		C
	ATOM	1793	C	TYR	A	322	28.139	-8.028	16.888	1.00	11.96		C
	ATOM	1794	O	TYR	A	322	27.859	-8.461	15.766	1.00	11.72		O
15	ATOM	1795	CB	TYR	A	322	26.730	-9.557	18.294	1.00	13.57		C
	ATOM	1796	CG	TYR	A	322	25.911	-8.526	19.051	1.00	14.10		C
	ATOM	1797	CD1	TYR	A	322	25.350	-7.434	18.383	1.00	15.48		C
	ATOM	1798	CD2	TYR	A	322	25.744	-8.631	20.424	1.00	14.15		C
	ATOM	1799	CE1	TYR	A	322	24.637	-6.478	19.070	1.00	13.81		C
20	ATOM	1800	CE2	TYR	A	322	25.027	-7.680	21.123	1.00	14.00		C
	ATOM	1801	CZ	TYR	A	322	24.476	-6.614	20.442	1.00	13.74		C
	ATOM	1802	OH	TYR	A	322	23.794	-5.667	21.153	1.00	12.10		O
	ATOM	1803	N	THR	A	323	28.466	-6.765	17.062	1.00	12.54		N
	ATOM	1804	CA	THR	A	323	28.556	-5.824	15.954	1.00	14.40		C
25	ATOM	1805	C	THR	A	323	29.950	-5.832	15.330	1.00	17.79		C
	ATOM	1806	O	THR	A	323	30.135	-5.317	14.222	1.00	16.25		O
	ATOM	1807	CB	THR	A	323	28.228	-4.392	16.386	1.00	13.73		C
	ATOM	1808	OG1	THR	A	323	29.199	-3.931	17.349	1.00	15.88		O
	ATOM	1809	CG2	THR	A	323	26.847	-4.266	17.013	1.00	11.85		C
30	ATOM	1810	N	SER	A	324	30.951	-6.350	16.044	1.00	17.37		N
	ATOM	1811	CA	SER	A	324	32.316	-6.328	15.495	1.00	18.42		C
	ATOM	1812	C	SER	A	324	32.433	-7.144	14.230	1.00	17.01		C
	ATOM	1813	O	SER	A	324	31.841	-8.216	14.129	1.00	18.39		O
	ATOM	1814	CB	SER	A	324	33.285	-6.915	16.544	1.00	21.35		C
35	ATOM	1815	OG	SER	A	324	34.591	-6.956	15.984	1.00	23.70		O
	ATOM	1816	N	PRO	A	325	33.223	-6.682	13.263	1.00	15.59		N
	ATOM	1817	CA	PRO	A	325	33.998	-5.463	13.348	1.00	14.87		C
	ATOM	1818	C	PRO	A	325	33.424	-4.245	12.649	1.00	13.60		C
	ATOM	1819	O	PRO	A	325	34.151	-3.395	12.118	1.00	11.66		O
40	ATOM	1820	CB	PRO	A	325	35.271	-5.900	12.597	1.00	15.85		C
	ATOM	1821	CG	PRO	A	325	34.738	-6.706	11.465	1.00	14.66		C
	ATOM	1822	CD	PRO	A	325	33.519	-7.424	12.009	1.00	15.79		C
	ATOM	1823	N	ASN	A	326	32.094	-4.155	12.570	1.00	11.77		N
	ATOM	1824	CA	ASN	A	326	31.498	-2.995	11.891	1.00	12.94		C
45	ATOM	1825	C	ASN	A	326	31.860	-1.739	12.649	1.00	11.80		C
	ATOM	1826	O	ASN	A	326	31.544	-1.610	13.834	1.00	12.08		O
	ATOM	1827	CB	ASN	A	326	29.962	-3.185	11.837	1.00	10.46		C
	ATOM	1828	CG	ASN	A	326	29.261	-2.189	10.942	1.00	14.62		C
	ATOM	1829	OD1	ASN	A	326	29.834	-1.170	10.548	1.00	10.01		O
50	ATOM	1830	ND2	ASN	A	326	27.998	-2.460	10.588	1.00	10.12		N
	ATOM	1831	N	PRO	A	327	32.488	-0.752	12.015	1.00	12.51		N
	ATOM	1832	CA	PRO	A	327	32.752	0.534	12.617	1.00	13.36		C
	ATOM	1833	C	PRO	A	327	31.470	1.295	12.944	1.00	14.81		C
	ATOM	1834	O	PRO	A	327	31.464	2.112	13.881	1.00	13.79		O
55	ATOM	1835	CB	PRO	A	327	33.535	1.323	11.573	1.00	15.50		C
	ATOM	1836	CG	PRO	A	327	33.846	0.371	10.476	1.00	16.62		C
	ATOM	1837	CD	PRO	A	327	32.867	-0.774	10.574	1.00	14.40		C
	ATOM	1838	N	ASN	A	328	30.402	1.094	12.154	1.00	9.74		N
	ATOM	1839	CA	ASN	A	328	29.143	1.812	12.402	1.00	10.19		C
60	ATOM	1840	C	ASN	A	328	28.243	0.879	13.204	1.00	12.18		C
	ATOM	1841	O	ASN	A	328	27.390	0.184	12.676	1.00	11.06		O
	ATOM	1842	CB	ASN	A	328	28.527	2.226	11.063	1.00	12.80		C
	ATOM	1843	CG	ASN	A	328	29.456	3.172	10.322	1.00	14.33		C
	ATOM	1844	OD1	ASN	A	328	30.041	4.051	10.974	1.00	14.84		O
65	ATOM	1845	ND2	ASN	A	328	29.610	3.035	9.011	1.00	11.92		N
	ATOM	1846	N	TYR	A	329	28.569	0.777	14.497	1.00	13.51		N
	ATOM	1847	CA	TYR	A	329	27.996	-0.189	15.398	1.00	13.75		C
	ATOM	1848	C	TYR	A	329	26.695	0.245	16.045	1.00	12.00		C
	ATOM	1849	O	TYR	A	329	26.132	-0.570	16.783	1.00	12.57		O
70	ATOM	1850	CB	TYR	A	329	29.045	-0.559	16.476	1.00	14.67		C
	ATOM	1851	CG	TYR	A	329	29.444	0.618	17.333	1.00	18.64		C
	ATOM	1852	CD1	TYR	A	329	28.684	1.014	18.422	1.00	17.95		C

	ATOM	1853	CD2	TYR A 329	30.605	1.342	17.048	1.00	21.28	C
	ATOM	1854	CE1	TYR A 329	29.061	2.101	19.194	1.00	20.94	C
	ATOM	1855	CE2	TYR A 329	30.989	2.428	17.813	1.00	21.04	C
	ATOM	1856	CZ	TYR A 329	30.207	2.797	18.889	1.00	23.73	C
5	ATOM	1857	OH	TYR A 329	30.571	3.885	19.660	1.00	26.36	O
	ATOM	1858	N	ASP A 330	26.203	1.451	15.785	1.00	12.31	N
	ATOM	1859	CA	ASP A 330	24.924	1.894	16.347	1.00	11.92	C
	ATOM	1860	C	ASP A 330	24.245	2.760	15.284	1.00	12.73	C
	ATOM	1861	O	ASP A 330	24.861	3.070	14.255	1.00	10.45	O
10	ATOM	1862	CB	ASP A 330	25.062	2.627	17.675	1.00	14.42	C
	ATOM	1863	CG	ASP A 330	26.007	3.802	17.654	1.00	15.78	C
	ATOM	1864	OD1	ASP A 330	26.263	4.391	16.580	1.00	14.20	O
	ATOM	1865	OD2	ASP A 330	26.522	4.184	18.736	1.00	16.79	O
	ATOM	1866	N	GLU A 331	22.997	3.146	15.511	1.00	12.67	N
15	ATOM	1867	CA	GLU A 331	22.269	3.907	14.491	1.00	11.99	C
	ATOM	1868	C	GLU A 331	22.816	5.303	14.285	1.00	12.65	C
	ATOM	1869	O	GLU A 331	22.811	5.736	13.132	1.00	11.93	O
	ATOM	1870	CB	GLU A 331	20.757	3.933	14.768	1.00	7.16	C
	ATOM	1871	CG	GLU A 331	20.195	2.502	14.830	1.00	9.29	C
20	ATOM	1872	CD	GLU A 331	20.294	1.816	13.475	1.00	10.33	C
	ATOM	1873	OE1	GLU A 331	19.807	2.404	12.492	1.00	8.53	O
	ATOM	1874	OE2	GLU A 331	20.919	0.742	13.355	1.00	10.92	O
	ATOM	1875	N	LYS A 332	23.300	5.982	15.324	1.00	13.62	N
	ATOM	1876	CA	LYS A 332	23.911	7.298	15.125	1.00	11.69	C
25	ATOM	1877	C	LYS A 332	25.101	7.222	14.180	1.00	10.86	C
	ATOM	1878	O	LYS A 332	25.239	8.051	13.288	1.00	11.24	O
	ATOM	1879	CB	LYS A 332	24.338	7.919	16.462	1.00	13.33	C
	ATOM	1880	CG	LYS A 332	25.004	9.292	16.311	1.00	15.61	C
	ATOM	1881	CD	LYS A 332	25.338	9.875	17.691	1.00	15.28	C
30	ATOM	1882	CE	LYS A 332	26.003	11.237	17.515	1.00	18.46	C
	ATOM	1883	NZ	LYS A 332	26.180	11.941	18.816	1.00	20.17	N
	ATOM	1884	N	HIS A 333	25.988	6.233	14.325	1.00	12.13	N
	ATOM	1885	CA	HIS A 333	27.130	6.085	13.430	1.00	10.52	C
	ATOM	1886	C	HIS A 333	26.633	5.817	12.004	1.00	12.35	C
35	ATOM	1887	O	HIS A 333	27.197	6.351	11.045	1.00	11.58	O
	ATOM	1888	CB	HIS A 333	28.044	4.918	13.808	1.00	12.44	C
	ATOM	1889	CG	HIS A 333	29.019	5.254	14.894	1.00	15.77	C
	ATOM	1890	ND1	HIS A 333	28.702	5.171	16.226	1.00	15.79	N
	ATOM	1891	CD2	HIS A 333	30.309	5.698	14.813	1.00	14.51	C
40	ATOM	1892	CE1	HIS A 333	29.761	5.541	16.937	1.00	17.94	C
	ATOM	1893	NE2	HIS A 333	30.748	5.860	16.108	1.00	15.66	N
	ATOM	1894	N	TYR A 334	25.649	4.923	11.878	1.00	7.78	N
	ATOM	1895	CA	TYR A 334	25.116	4.617	10.547	1.00	10.34	C
	ATOM	1896	C	TYR A 334	24.563	5.856	9.859	1.00	10.74	C
45	ATOM	1897	O	TYR A 334	24.930	6.168	8.719	1.00	12.95	O
	ATOM	1898	CB	TYR A 334	24.051	3.518	10.680	1.00	8.54	C
	ATOM	1899	CG	TYR A 334	23.168	3.218	9.489	1.00	7.49	C
	ATOM	1900	CD1	TYR A 334	23.622	3.298	8.182	1.00	8.36	C
	ATOM	1901	CD2	TYR A 334	21.845	2.805	9.696	1.00	6.89	C
50	ATOM	1902	CE1	TYR A 334	22.807	3.020	7.098	1.00	9.11	C
	ATOM	1903	CE2	TYR A 334	21.026	2.500	8.620	1.00	8.56	C
	ATOM	1904	CZ	TYR A 334	21.495	2.610	7.334	1.00	8.78	C
	ATOM	1905	OH	TYR A 334	20.668	2.312	6.265	1.00	7.45	O
	ATOM	1906	N	ILE A 335	23.655	6.568	10.515	1.00	10.74	N
55	ATOM	1907	CA	ILE A 335	23.033	7.756	9.937	1.00	9.79	C
	ATOM	1908	C	ILE A 335	23.985	8.909	9.679	1.00	13.38	C
	ATOM	1909	O	ILE A 335	23.878	9.571	8.629	1.00	11.65	O
	ATOM	1910	CB	ILE A 335	21.863	8.192	10.845	1.00	10.61	C
	ATOM	1911	CG1	ILE A 335	20.765	7.133	10.688	1.00	12.96	C
60	ATOM	1912	CG2	ILE A 335	21.366	9.579	10.467	1.00	11.76	C
	ATOM	1913	CD1	ILE A 335	19.663	7.170	11.716	1.00	11.64	C
	ATOM	1914	N	GLU A 336	24.939	9.139	10.592	1.00	9.63	N
	ATOM	1915	CA	GLU A 336	25.935	10.199	10.338	1.00	12.73	C
	ATOM	1916	C	GLU A 336	26.784	9.920	9.115	1.00	13.16	C
65	ATOM	1917	O	GLU A 336	27.124	10.863	8.391	1.00	12.25	O
	ATOM	1918	CB	GLU A 336	26.762	10.506	11.584	1.00	12.44	C
	ATOM	1919	CG	GLU A 336	25.946	11.357	12.555	1.00	14.68	C
	ATOM	1920	CD	GLU A 336	26.731	11.825	13.770	1.00	14.65	C
	ATOM	1921	OE1	GLU A 336	27.835	11.294	14.011	1.00	15.28	O
70	ATOM	1922	OE2	GLU A 336	26.195	12.691	14.491	1.00	14.11	O
	ATOM	1923	N	ALA A 337	27.061	8.679	8.764	1.00	14.58	N
	ATOM	1924	CA	ALA A 337	27.803	8.337	7.562	1.00	14.30	C

	ATOM	1925	C	ALA A 337	26.930	8.306	6.304	1.00	15.31	C
	ATOM	1926	O	ALA A 337	27.381	8.589	5.189	1.00	12.60	O
	ATOM	1927	CB	ALA A 337	28.404	6.943	7.746	1.00	14.02	C
	ATOM	1928	N	PHE A 338	25.680	7.869	6.450	1.00	10.62	N
5	ATOM	1929	CA	PHE A 338	24.738	7.697	5.365	1.00	9.89	C
	ATOM	1930	C	PHE A 338	24.135	8.979	4.828	1.00	8.70	C
	ATOM	1931	O	PHE A 338	24.142	9.215	3.614	1.00	10.69	O
	ATOM	1932	CB	PHE A 338	23.614	6.772	5.886	1.00	11.18	C
	ATOM	1933	CG	PHE A 338	22.667	6.165	4.897	1.00	11.79	C
10	ATOM	1934	CD1	PHE A 338	22.982	6.000	3.559	1.00	8.39	C
	ATOM	1935	CD2	PHE A 338	21.447	5.671	5.358	1.00	9.80	C
	ATOM	1936	CE1	PHE A 338	22.096	5.399	2.685	1.00	8.73	C
	ATOM	1937	CE2	PHE A 338	20.552	5.070	4.488	1.00	9.34	C
	ATOM	1938	CZ	PHE A 338	20.877	4.933	3.154	1.00	12.90	C
15	ATOM	1939	N	ARG A 339	23.717	9.901	5.696	1.00	6.96	N
	ATOM	1940	CA	ARG A 339	23.084	11.148	5.261	1.00	9.28	C
	ATOM	1941	C	ARG A 339	23.860	11.971	4.269	1.00	9.30	C
	ATOM	1942	O	ARG A 339	23.310	12.383	3.238	1.00	11.10	O
	ATOM	1943	CB	ARG A 339	22.654	11.960	6.482	1.00	9.94	C
20	ATOM	1944	CG	ARG A 339	22.182	13.380	6.260	1.00	12.91	C
	ATOM	1945	CD	ARG A 339	21.045	13.545	5.261	1.00	14.88	C
	ATOM	1946	NE	ARG A 339	20.816	14.987	5.111	1.00	16.65	N
	ATOM	1947	CZ	ARG A 339	19.982	15.673	5.878	1.00	16.47	C
	ATOM	1948	NH1	ARG A 339	19.275	15.042	6.810	1.00	14.80	N
25	ATOM	1949	NH2	ARG A 339	19.860	16.976	5.679	1.00	18.03	N
	ATOM	1950	N	PRO A 340	25.137	12.284	4.493	1.00	12.84	N
	ATOM	1951	CA	PRO A 340	25.916	13.074	3.549	1.00	12.72	C
	ATOM	1952	C	PRO A 340	25.936	12.483	2.153	1.00	12.78	C
	ATOM	1953	O	PRO A 340	25.890	13.216	1.150	1.00	10.55	O
30	ATOM	1954	CB	PRO A 340	27.312	13.154	4.171	1.00	14.90	C
	ATOM	1955	CG	PRO A 340	27.120	12.804	5.606	1.00	16.25	C
	ATOM	1956	CD	PRO A 340	25.898	11.930	5.708	1.00	13.20	C
	ATOM	1957	N	LEU A 341	26.019	11.148	2.025	1.00	10.11	N
	ATOM	1958	CA	LEU A 341	26.019	10.516	0.710	1.00	9.98	C
35	ATOM	1959	C	LEU A 341	24.670	10.638	0.028	1.00	9.00	C
	ATOM	1960	O	LEU A 341	24.592	10.873	-1.181	1.00	10.98	O
	ATOM	1961	CB	LEU A 341	26.432	9.040	0.840	1.00	13.65	C
	ATOM	1962	CG	LEU A 341	27.918	8.936	1.269	1.00	19.15	C
	ATOM	1963	CD1	LEU A 341	28.126	7.751	2.186	1.00	22.88	C
40	ATOM	1964	CD2	LEU A 341	28.770	8.837	0.023	1.00	23.80	C
	ATOM	1965	N	LEU A 342	23.607	10.496	0.815	1.00	8.10	N
	ATOM	1966	CA	LEU A 342	22.255	10.660	0.278	1.00	11.17	C
	ATOM	1967	C	LEU A 342	22.086	12.103	-0.196	1.00	10.19	C
	ATOM	1968	O	LEU A 342	21.525	12.363	-1.263	1.00	10.33	O
45	ATOM	1969	CB	LEU A 342	21.224	10.337	1.374	1.00	7.92	C
	ATOM	1970	CG	LEU A 342	21.098	8.859	1.758	1.00	11.33	C
	ATOM	1971	CD1	LEU A 342	20.478	8.717	3.137	1.00	7.93	C
	ATOM	1972	CD2	LEU A 342	20.246	8.117	0.723	1.00	8.97	C
	ATOM	1973	N	GLU A 343	22.446	13.056	0.667	1.00	10.39	N
50	ATOM	1974	CA	GLU A 343	22.263	14.475	0.381	1.00	10.01	C
	ATOM	1975	C	GLU A 343	23.012	14.922	-0.857	1.00	11.97	C
	ATOM	1976	O	GLU A 343	22.491	15.661	-1.708	1.00	12.57	O
	ATOM	1977	CB	GLU A 343	22.598	15.318	1.621	1.00	12.83	C
	ATOM	1978	CG	GLU A 343	22.294	16.798	1.396	1.00	18.77	C
55	ATOM	1979	CD	GLU A 343	22.024	17.582	2.655	1.00	19.20	C
	ATOM	1980	OE1	GLU A 343	22.291	17.078	3.768	1.00	21.19	O
	ATOM	1981	OE2	GLU A 343	21.525	18.727	2.548	1.00	21.18	O
	ATOM	1982	N	ALA A 344	24.226	14.410	-1.066	1.00	11.16	N
	ATOM	1983	CA	ALA A 344	25.017	14.719	-2.253	1.00	13.43	C
60	ATOM	1984	C	ALA A 344	24.367	14.212	-3.530	1.00	14.55	C
	ATOM	1985	O	ALA A 344	24.661	14.647	-4.657	1.00	15.36	O
	ATOM	1986	CB	ALA A 344	26.411	14.105	-2.079	1.00	11.18	C
	ATOM	1987	N	ARG A 345	23.488	13.222	-3.423	1.00	12.33	N
	ATOM	1988	CA	ARG A 345	22.784	12.630	-4.537	1.00	13.25	C
65	ATOM	1989	C	ARG A 345	21.347	13.137	-4.630	1.00	14.69	C
	ATOM	1990	O	ARG A 345	20.534	12.511	-5.309	1.00	11.15	O
	ATOM	1991	CB	ARG A 345	22.841	11.098	-4.429	1.00	13.43	C
	ATOM	1992	CG	ARG A 345	24.292	10.619	-4.534	1.00	14.60	C
	ATOM	1993	CD	ARG A 345	24.485	9.154	-4.226	1.00	17.43	C
70	ATOM	1994	NE	ARG A 345	25.862	8.730	-4.452	1.00	17.71	N
	ATOM	1995	CZ	ARG A 345	26.928	9.074	-3.738	1.00	23.50	C
	ATOM	1996	NH1	ARG A 345	26.863	9.864	-2.669	1.00	17.69	N

	ATOM	1997	NH2	ARG	A	345	28.114	8.602	-4.103	1.00	23.81	N
	ATOM	1998	N	GLY	A	346	21.060	14.280	-4.010	1.00	11.84	N
	ATOM	1999	CA	GLY	A	346	19.764	14.918	-4.178	1.00	12.92	C
	ATOM	2000	C	GLY	A	346	18.678	14.563	-3.187	1.00	11.40	C
5	ATOM	2001	O	GLY	A	346	17.527	15.019	-3.337	1.00	8.76	O
	ATOM	2002	N	PHE	A	347	19.018	13.780	-2.168	1.00	12.55	N
	ATOM	2003	CA	PHE	A	347	17.996	13.385	-1.177	1.00	11.96	C
	ATOM	2004	C	PHE	A	347	18.454	13.708	0.227	1.00	11.44	C
	ATOM	2005	O	PHE	A	347	19.114	12.896	0.872	1.00	11.58	O
10	ATOM	2006	CB	PHE	A	347	17.750	11.876	-1.340	1.00	11.24	C
	ATOM	2007	CG	PHE	A	347	16.637	11.259	-0.528	1.00	13.04	C
	ATOM	2008	CD1	PHE	A	347	15.647	12.015	0.069	1.00	12.13	C
	ATOM	2009	CD2	PHE	A	347	16.586	9.870	-0.389	1.00	11.26	C
	ATOM	2010	CE1	PHE	A	347	14.626	11.425	0.798	1.00	13.16	C
15	ATOM	2011	CE2	PHE	A	347	15.574	9.270	0.339	1.00	11.40	C
	ATOM	2012	CZ	PHE	A	347	14.596	10.042	0.925	1.00	11.56	C
	ATOM	2013	N	PRO	A	348	18.063	14.841	0.799	1.00	13.23	N
	ATOM	2014	CA	PRO	A	348	18.484	15.260	2.138	1.00	13.82	C
	ATOM	2015	C	PRO	A	348	17.563	14.639	3.180	1.00	13.97	C
20	ATOM	2016	O	PRO	A	348	16.813	15.285	3.910	1.00	12.48	O
	ATOM	2017	CB	PRO	A	348	18.308	16.785	2.067	1.00	13.80	C
	ATOM	2018	CG	PRO	A	348	17.096	16.939	1.201	1.00	14.81	C
	ATOM	2019	CD	PRO	A	348	17.264	15.889	0.124	1.00	13.97	C
	ATOM	2020	N	ALA	A	349	17.558	13.315	3.208	1.00	11.56	N
25	ATOM	2021	CA	ALA	A	349	16.700	12.506	4.034	1.00	12.18	C
	ATOM	2022	C	ALA	A	349	16.841	12.765	5.527	1.00	10.93	C
	ATOM	2023	O	ALA	A	349	17.917	12.750	6.109	1.00	10.86	O
	ATOM	2024	CB	ALA	A	349	16.965	11.024	3.749	1.00	10.43	C
	ATOM	2025	N	GLN	A	350	15.685	12.985	6.130	1.00	9.76	N
30	ATOM	2026	CA	GLN	A	350	15.559	13.090	7.576	1.00	10.00	C
	ATOM	2027	C	GLN	A	350	15.222	11.676	8.049	1.00	9.55	C
	ATOM	2028	O	GLN	A	350	14.642	10.910	7.267	1.00	10.83	O
	ATOM	2029	CB	GLN	A	350	14.492	14.090	7.996	1.00	9.57	C
	ATOM	2030	CG	GLN	A	350	14.922	15.536	7.812	1.00	12.31	C
35	ATOM	2031	CD	GLN	A	350	16.092	15.926	8.700	1.00	14.64	C
	ATOM	2032	OE1	GLN	A	350	17.204	16.158	8.231	1.00	16.94	O
	ATOM	2033	NE2	GLN	A	350	15.868	16.018	10.010	1.00	13.88	N
	ATOM	2034	N	PHE	A	351	15.663	11.305	9.240	1.00	8.69	N
	ATOM	2035	CA	PHE	A	351	15.455	9.939	9.698	1.00	8.77	C
40	ATOM	2036	C	PHE	A	351	14.556	9.803	10.896	1.00	8.32	C
	ATOM	2037	O	PHE	A	351	14.406	10.716	11.711	1.00	8.72	O
	ATOM	2038	CB	PHE	A	351	16.842	9.380	10.117	1.00	10.92	C
	ATOM	2039	CG	PHE	A	351	17.733	9.089	8.945	1.00	9.64	C
	ATOM	2040	CD1	PHE	A	351	18.421	10.103	8.297	1.00	11.78	C
45	ATOM	2041	CD2	PHE	A	351	17.881	7.789	8.496	1.00	10.24	C
	ATOM	2042	CE1	PHE	A	351	19.219	9.810	7.198	1.00	10.48	C
	ATOM	2043	CE2	PHE	A	351	18.694	7.489	7.413	1.00	8.56	C
	ATOM	2044	CZ	PHE	A	351	19.370	8.513	6.771	1.00	9.23	C
	ATOM	2045	N	ILE	A	352	13.964	8.613	11.033	1.00	7.47	N
50	ATOM	2046	CA	ILE	A	352	13.256	8.251	12.254	1.00	8.08	C
	ATOM	2047	C	ILE	A	352	13.897	6.909	12.650	1.00	7.08	C
	ATOM	2048	O	ILE	A	352	14.272	6.120	11.764	1.00	8.28	O
	ATOM	2049	CB	ILE	A	352	11.745	8.145	12.239	1.00	7.94	C
	ATOM	2050	CG1	ILE	A	352	11.278	7.093	11.213	1.00	6.92	C
55	ATOM	2051	CG2	ILE	A	352	11.086	9.490	11.954	1.00	7.41	C
	ATOM	2052	CD1	ILE	A	352	9.764	6.881	11.272	1.00	10.15	C
	ATOM	2053	N	VAL	A	353	14.104	6.697	13.944	1.00	7.36	N
	ATOM	2054	CA	VAL	A	353	14.814	5.494	14.390	1.00	8.29	C
	ATOM	2055	C	VAL	A	353	14.024	4.719	15.438	1.00	7.66	C
60	ATOM	2056	O	VAL	A	353	13.646	5.312	16.448	1.00	7.89	O
	ATOM	2057	CB	VAL	A	353	16.174	5.868	15.036	1.00	8.48	C
	ATOM	2058	CG1	VAL	A	353	16.932	4.617	15.465	1.00	7.58	C
	ATOM	2059	CG2	VAL	A	353	17.043	6.710	14.101	1.00	11.26	C
	ATOM	2060	N	ASP	A	354	13.806	3.432	15.194	1.00	7.41	N
65	ATOM	2061	CA	ASP	A	354	13.062	2.593	16.147	1.00	8.11	C
	ATOM	2062	C	ASP	A	354	13.975	2.332	17.346	1.00	9.35	C
	ATOM	2063	O	ASP	A	354	15.160	2.038	17.191	1.00	7.62	O
	ATOM	2064	CB	ASP	A	354	12.633	1.294	15.482	1.00	6.20	C
	ATOM	2065	CG	ASP	A	354	11.586	0.460	16.174	1.00	7.49	C
70	ATOM	2066	OD1	ASP	A	354	11.241	0.771	17.334	1.00	7.99	O
	ATOM	2067	OD2	ASP	A	354	11.084	-0.522	15.580	1.00	7.38	O
	ATOM	2068	N	GLN	A	355	13.443	2.571	18.535	1.00	11.53	N

	ATOM	2069	CA	GLN A 355	14.138	2.358	19.796	1.00 11.42	C
	ATOM	2070	C	GLN A 355	13.214	1.614	20.755	1.00 12.94	C
	ATOM	2071	O	GLN A 355	13.517	1.428	21.939	1.00 9.56	O
	ATOM	2072	CB	GLN A 355	14.598	3.669	20.409	1.00 13.21	C
5	ATOM	2073	CG	GLN A 355	15.724	4.377	19.670	1.00 11.58	C
	ATOM	2074	CD	GLN A 355	17.038	3.635	19.792	1.00 13.08	C
	ATOM	2075	OE1	GLN A 355	17.662	3.659	20.856	1.00 11.07	O
	ATOM	2076	NE2	GLN A 355	17.453	2.962	18.722	1.00 12.59	N
	ATOM	2077	N	GLY A 356	12.131	1.044	20.203	1.00 9.58	N
10	ATOM	2078	CA	GLY A 356	11.183	0.309	21.030	1.00 11.28	C
	ATOM	2079	C	GLY A 356	11.785	-0.859	21.798	1.00 11.42	C
	ATOM	2080	O	GLY A 356	11.231	-1.286	22.819	1.00 13.11	O
	ATOM	2081	N	ARG A 357	12.845	-1.493	21.300	1.00 9.98	N
	ATOM	2082	CA	ARG A 357	13.452	-2.641	21.980	1.00 10.49	C
15	ATOM	2083	C	ARG A 357	14.956	-2.432	22.118	1.00 10.61	C
	ATOM	2084	O	ARG A 357	15.712	-3.405	22.096	1.00 10.60	O
	ATOM	2085	CB	ARG A 357	13.094	-3.918	21.191	1.00 6.30	C
	ATOM	2086	CG	ARG A 357	11.592	-4.235	21.219	1.00 9.33	C
	ATOM	2087	CD	ARG A 357	11.152	-5.573	20.686	1.00 10.11	C
20	ATOM	2088	NE	ARG A 357	11.503	-5.805	19.286	1.00 9.06	N
	ATOM	2089	CZ	ARG A 357	11.262	-6.942	18.642	1.00 11.52	C
	ATOM	2090	NH1	ARG A 357	10.671	-7.923	19.318	1.00 10.50	N
	ATOM	2091	NH2	ARG A 357	11.635	-7.125	17.372	1.00 7.18	N
	ATOM	2092	N	SER A 358	15.380	-1.170	22.232	1.00 11.46	N
25	ATOM	2093	CA	SER A 358	16.805	-0.824	22.247	1.00 10.13	C
	ATOM	2094	C	SER A 358	17.370	-0.372	23.583	1.00 11.53	C
	ATOM	2095	O	SER A 358	18.539	0.066	23.687	1.00 12.37	O
	ATOM	2096	CB	SER A 358	16.988	0.348	21.245	1.00 9.78	C
	ATOM	2097	OG	SER A 358	16.843	-0.180	19.916	1.00 9.37	O
30	ATOM	2098	N	GLY A 359	16.567	-0.459	24.631	1.00 8.41	N
	ATOM	2099	CA	GLY A 359	16.929	0.013	25.945	1.00 11.24	C
	ATOM	2100	C	GLY A 359	18.168	-0.645	26.556	1.00 10.77	C
	ATOM	2101	O	GLY A 359	19.005	0.093	27.066	1.00 14.30	O
	ATOM	2102	N	LYS A 360	18.317	-1.947	26.449	1.00 11.40	N
35	ATOM	2103	CA	LYS A 360	19.437	-2.659	27.063	1.00 13.69	C
	ATOM	2104	C	LYS A 360	20.533	-2.957	26.044	1.00 13.62	C
	ATOM	2105	O	LYS A 360	20.292	-3.592	25.016	1.00 12.09	O
	ATOM	2106	CB	LYS A 360	18.945	-3.982	27.662	1.00 12.11	C
	ATOM	2107	CG	LYS A 360	19.889	-4.578	28.705	1.00 17.84	C
40	ATOM	2108	CD	LYS A 360	19.223	-5.780	29.374	1.00 23.30	C
	ATOM	2109	CE	LYS A 360	19.989	-6.259	30.595	1.00 29.30	C
	ATOM	2110	NZ	LYS A 360	21.394	-6.616	30.263	1.00 29.46	N
	ATOM	2111	N	GLN A 361	21.721	-2.405	26.310	1.00 12.86	N
	ATOM	2112	CA	GLN A 361	22.870	-2.598	25.421	1.00 14.17	C
45	ATOM	2113	C	GLN A 361	24.094	-3.041	26.226	1.00 16.49	C
	ATOM	2114	O	GLN A 361	24.384	-2.414	27.241	1.00 16.24	O
	ATOM	2115	CB	GLN A 361	23.188	-1.268	24.731	1.00 14.32	C
	ATOM	2116	CG	GLN A 361	22.077	-0.680	23.869	1.00 9.89	C
	ATOM	2117	CD	GLN A 361	21.740	-1.556	22.684	1.00 13.07	C
50	ATOM	2118	OE1	GLN A 361	22.618	-2.284	22.210	1.00 13.09	O
	ATOM	2119	NE2	GLN A 361	20.502	-1.495	22.177	1.00 8.77	N
	ATOM	2120	N	PRO A 362	24.814	-4.042	25.762	1.00 18.13	N
	ATOM	2121	CA	PRO A 362	24.476	-4.805	24.579	1.00 16.66	C
	ATOM	2122	C	PRO A 362	23.230	-5.656	24.790	1.00 17.75	C
55	ATOM	2123	O	PRO A 362	22.883	-5.897	25.958	1.00 15.49	O
	ATOM	2124	CB	PRO A 362	25.648	-5.763	24.397	1.00 19.10	C
	ATOM	2125	CG	PRO A 362	26.715	-5.340	25.342	1.00 20.94	C
	ATOM	2126	CD	PRO A 362	26.022	-4.595	26.441	1.00 19.31	C
	ATOM	2127	N	THR A 363	22.642	-6.190	23.716	1.00 12.07	N
60	ATOM	2128	CA	THR A 363	21.485	-7.063	23.909	1.00 13.87	C
	ATOM	2129	C	THR A 363	21.947	-8.483	24.229	1.00 16.38	C
	ATOM	2130	O	THR A 363	23.159	-8.740	24.353	1.00 17.15	O
	ATOM	2131	CB	THR A 363	20.622	-7.100	22.629	1.00 14.61	C
	ATOM	2132	OG1	THR A 363	21.374	-7.829	21.648	1.00 14.52	O
65	ATOM	2133	CG2	THR A 363	20.304	-5.693	22.129	1.00 10.96	C
	ATOM	2134	N	GLY A 364	21.033	-9.445	24.237	1.00 14.44	N
	ATOM	2135	CA	GLY A 364	21.397	-10.842	24.429	1.00 16.91	C
	ATOM	2136	C	GLY A 364	21.640	-11.562	23.107	1.00 15.93	C
	ATOM	2137	O	GLY A 364	21.759	-12.796	23.069	1.00 16.01	O
70	ATOM	2138	N	GLN A 365	21.670	-10.837	21.990	1.00 13.92	N
	ATOM	2139	CA	GLN A 365	21.895	-11.420	20.681	1.00 12.65	C
	ATOM	2140	C	GLN A 365	23.294	-12.045	20.600	1.00 14.06	C

	ATOM	2141	O	GLN	A	365	24.255	-11.390	21.010	1.00	14.30	O
	ATOM	2142	CB	GLN	A	365	21.821	-10.362	19.565	1.00	11.46	C
	ATOM	2143	CG	GLN	A	365	20.408	-9.802	19.372	1.00	11.44	C
	ATOM	2144	CD	GLN	A	365	20.377	-8.530	18.555	1.00	8.49	C
5	ATOM	2145	OE1	GLN	A	365	20.789	-7.483	19.046	1.00	10.68	O
	ATOM	2146	NE2	GLN	A	365	19.935	-8.604	17.302	1.00	10.40	N
	ATOM	2147	N	LYS	A	366	23.376	-13.245	20.061	1.00	14.56	N
	ATOM	2148	CA	LYS	A	366	24.655	-13.923	19.891	1.00	16.55	C
	ATOM	2149	C	LYS	A	366	25.310	-13.449	18.600	1.00	17.19	C
10	ATOM	2150	O	LYS	A	366	26.529	-13.434	18.461	1.00	14.35	O
	ATOM	2151	CB	LYS	A	366	24.500	-15.450	19.865	1.00	17.82	C
	ATOM	2152	CG	LYS	A	366	24.104	-16.000	21.237	1.00	25.09	C
	ATOM	2153	CD	LYS	A	366	25.167	-15.643	22.277	1.00	28.19	C
	ATOM	2154	CE	LYS	A	366	26.095	-16.817	22.543	1.00	32.67	C
15	ATOM	2155	NZ	LYS	A	366	25.665	-17.535	23.787	1.00	36.57	N
	ATOM	2156	N	GLU	A	367	24.488	-13.163	17.595	1.00	14.58	N
	ATOM	2157	CA	GLU	A	367	24.897	-12.661	16.291	1.00	16.66	C
	ATOM	2158	C	GLU	A	367	23.940	-11.511	15.939	1.00	16.50	C
	ATOM	2159	O	GLU	A	367	22.764	-11.520	16.319	1.00	11.08	O
20	ATOM	2160	CB	GLU	A	367	24.900	-13.707	15.190	1.00	18.74	C
	ATOM	2161	CG AGLU		A	367	25.785	-14.922	15.359	0.50	19.66	C
	ATOM	2162	CG BGLU		A	367	25.883	-14.840	15.413	0.50	22.22	C
	ATOM	2163	CD AGLU		A	367	27.269	-14.624	15.434	0.50	21.41	C
	ATOM	2164	CD BGLU		A	367	25.887	-15.915	14.358	0.50	23.81	C
25	ATOM	2165	OE1AGLU		A	367	27.693	-13.538	14.986	0.50	20.72	O
	ATOM	2166	OE1BGLU		A	367	25.208	-15.749	13.325	0.50	26.57	O
	ATOM	2167	OE2AGLU		A	367	28.037	-15.479	15.934	0.50	20.01	O
	ATOM	2168	OE2BGLU		A	367	26.579	-16.938	14.559	0.50	26.93	O
	ATOM	2169	N	TRP	A	368	24.439	-10.500	15.250	1.00	13.30	N
30	ATOM	2170	CA	TRP	A	368	23.691	-9.304	14.915	1.00	13.09	C
	ATOM	2171	C	TRP	A	368	22.463	-9.544	14.061	1.00	12.80	C
	ATOM	2172	O	TRP	A	368	21.435	-8.871	14.250	1.00	10.69	O
	ATOM	2173	CB	TRP	A	368	24.611	-8.304	14.183	1.00	14.76	C
	ATOM	2174	CG	TRP	A	368	24.283	-6.859	14.398	1.00	13.52	C
35	ATOM	2175	CD1	TRP	A	368	23.175	-6.329	14.994	1.00	13.63	C
	ATOM	2176	CD2	TRP	A	368	25.092	-5.742	14.009	1.00	11.73	C
	ATOM	2177	NE1	TRP	A	368	23.239	-4.957	15.004	1.00	12.26	N
	ATOM	2178	CE2	TRP	A	368	24.413	-4.573	14.397	1.00	12.86	C
	ATOM	2179	CE3	TRP	A	368	26.327	-5.623	13.362	1.00	13.61	C
40	ATOM	2180	CZ2	TRP	A	368	24.922	-3.299	14.169	1.00	10.40	C
	ATOM	2181	CZ3	TRP	A	368	26.834	-4.357	13.132	1.00	11.45	C
	ATOM	2182	CH2	TRP	A	368	26.137	-3.208	13.536	1.00	10.27	C
	ATOM	2183	N	GLY	A	369	22.517	-10.525	13.164	1.00	11.73	N
	ATOM	2184	CA	GLY	A	369	21.417	-10.878	12.300	1.00	12.49	C
45	ATOM	2185	C	GLY	A	369	20.338	-11.698	13.001	1.00	12.52	C
	ATOM	2186	O	GLY	A	369	19.412	-12.154	12.332	1.00	13.60	O
	ATOM	2187	N	HIS	A	370	20.440	-11.932	14.304	1.00	12.82	N
	ATOM	2188	CA	HIS	A	370	19.397	-12.686	15.022	1.00	12.27	C
	ATOM	2189	C	HIS	A	370	18.304	-11.697	15.409	1.00	12.62	C
50	ATOM	2190	O	HIS	A	370	18.446	-10.975	16.397	1.00	14.21	O
	ATOM	2191	CB	HIS	A	370	19.986	-13.391	16.238	1.00	10.86	C
	ATOM	2192	CG	HIS	A	370	20.928	-14.503	15.853	1.00	13.37	C
	ATOM	2193	ND1	HIS	A	370	21.663	-15.203	16.783	1.00	15.98	N
	ATOM	2194	CD2	HIS	A	370	21.262	-15.003	14.637	1.00	16.19	C
55	ATOM	2195	CE1	HIS	A	370	22.387	-16.119	16.152	1.00	15.27	C
	ATOM	2196	NE2	HIS	A	370	22.165	-16.018	14.854	1.00	15.58	N
	ATOM	2197	N	TRP	A	371	17.242	-11.647	14.613	1.00	12.56	N
	ATOM	2198	CA	TRP	A	371	16.209	-10.637	14.827	1.00	12.02	C
	ATOM	2199	C	TRP	A	371	14.955	-11.117	15.528	1.00	12.14	C
60	ATOM	2200	O	TRP	A	371	14.091	-10.291	15.844	1.00	10.90	O
	ATOM	2201	CB	TRP	A	371	15.749	-10.126	13.438	1.00	9.54	C
	ATOM	2202	CG	TRP	A	371	15.366	-11.188	12.462	1.00	11.32	C
	ATOM	2203	CD1	TRP	A	371	16.152	-11.684	11.461	1.00	14.90	C
	ATOM	2204	CD2	TRP	A	371	14.111	-11.878	12.343	1.00	10.64	C
65	ATOM	2205	NE1	TRP	A	371	15.477	-12.637	10.750	1.00	15.34	N
	ATOM	2206	CE2	TRP	A	371	14.216	-12.773	11.274	1.00	12.80	C
	ATOM	2207	CE3	TRP	A	371	12.913	-11.825	13.070	1.00	6.86	C
	ATOM	2208	CZ2	TRP	A	371	13.185	-13.631	10.887	1.00	12.65	C
	ATOM	2209	CZ3	TRP	A	371	11.879	-12.657	12.685	1.00	9.59	C
70	ATOM	2210	CH2	TRP	A	371	12.011	-13.545	11.608	1.00	11.86	C
	ATOM	2211	N	CYS	A	372	14.810	-12.427	15.725	1.00	11.94	N
	ATOM	2212	CA	CYS	A	372	13.564	-12.903	16.307	1.00	11.69	C

	ATOM	2213	C	CYS A 372	13.493	-13.035	17.808	1.00	12.79	C
	ATOM	2214	O	CYS A 372	14.248	-13.776	18.447	1.00	11.89	O
	ATOM	2215	CB	CYS A 372	13.231	-14.231	15.602	1.00	11.72	C
	ATOM	2216	SG	CYS A 372	11.555	-14.776	16.052	1.00	10.80	S
5	ATOM	2217	N	ASN A 373	12.580	-12.268	18.414	1.00	10.43	N
	ATOM	2218	CA	ASN A 373	12.319	-12.339	19.851	1.00	11.60	C
	ATOM	2219	C	ASN A 373	13.624	-12.463	20.630	1.00	11.60	C
	ATOM	2220	O	ASN A 373	13.703	-13.286	21.562	1.00	12.62	O
	ATOM	2221	CB	ASN A 373	11.449	-13.567	20.134	1.00	7.20	C
10	ATOM	2222	CG	ASN A 373	10.171	-13.675	19.356	1.00	10.48	C
	ATOM	2223	OD1	ASN A 373	9.466	-12.694	19.079	1.00	11.46	O
	ATOM	2224	ND2	ASN A 373	9.828	-14.897	18.961	1.00	9.89	N
	ATOM	2225	N	ALA A 374	14.529	-11.522	20.408	1.00	12.19	N
	ATOM	2226	CA	ALA A 374	15.853	-11.599	21.013	1.00	13.32	C
15	ATOM	2227	C	ALA A 374	15.821	-11.449	22.527	1.00	13.60	C
	ATOM	2228	O	ALA A 374	15.140	-10.567	23.058	1.00	10.40	O
	ATOM	2229	CB	ALA A 374	16.755	-10.542	20.389	1.00	13.95	C
	ATOM	2230	N	ILE A 375	16.597	-12.300	23.200	1.00	14.26	N
	ATOM	2231	CA	ILE A 375	16.675	-12.212	24.665	1.00	13.63	C
20	ATOM	2232	C	ILE A 375	17.570	-11.053	25.067	1.00	15.61	C
	ATOM	2233	O	ILE A 375	18.305	-10.489	24.247	1.00	14.65	O
	ATOM	2234	CB	ILE A 375	17.201	-13.533	25.262	1.00	13.82	C
	ATOM	2235	CG1	ILE A 375	18.538	-13.952	24.636	1.00	15.63	C
	ATOM	2236	CG2	ILE A 375	16.152	-14.622	25.021	1.00	12.82	C
25	ATOM	2237	CD1	ILE A 375	19.210	-15.159	25.270	1.00	15.14	C
	ATOM	2238	N	GLY A 376	17.461	-10.639	26.326	1.00	14.51	N
	ATOM	2239	CA	GLY A 376	18.261	-9.598	26.918	1.00	15.11	C
	ATOM	2240	C	GLY A 376	18.075	-8.206	26.350	1.00	14.35	C
	ATOM	2241	O	GLY A 376	19.008	-7.398	26.293	1.00	12.94	O
30	ATOM	2242	N	THR A 377	16.835	-7.910	25.969	1.00	13.43	N
	ATOM	2243	CA	THR A 377	16.458	-6.629	25.411	1.00	14.16	C
	ATOM	2244	C	THR A 377	15.477	-5.919	26.342	1.00	14.52	C
	ATOM	2245	O	THR A 377	14.844	-6.566	27.171	1.00	13.61	O
	ATOM	2246	CB	THR A 377	15.784	-6.781	24.037	1.00	14.23	C
35	ATOM	2247	OG1	THR A 377	14.564	-7.531	24.209	1.00	13.57	O
	ATOM	2248	CG2	THR A 377	16.712	-7.512	23.063	1.00	9.16	C
	ATOM	2249	N	GLY A 378	15.386	-4.608	26.215	1.00	14.11	N
	ATOM	2250	CA	GLY A 378	14.490	-3.827	27.054	1.00	13.01	C
	ATOM	2251	C	GLY A 378	13.863	-2.667	26.288	1.00	12.69	C
40	ATOM	2252	O	GLY A 378	14.401	-2.278	25.259	1.00	11.68	O
	ATOM	2253	N	PHE A 379	12.748	-2.126	26.771	1.00	11.50	N
	ATOM	2254	CA	PHE A 379	12.139	-0.955	26.156	1.00	12.13	C
	ATOM	2255	C	PHE A 379	13.146	0.189	26.136	1.00	14.61	C
	ATOM	2256	O	PHE A 379	13.843	0.421	27.138	1.00	15.51	O
45	ATOM	2257	CB	PHE A 379	10.910	-0.460	26.931	1.00	13.63	C
	ATOM	2258	CG	PHE A 379	9.711	-1.349	26.771	1.00	14.82	C
	ATOM	2259	CD1	PHE A 379	9.141	-1.530	25.520	1.00	11.34	C
	ATOM	2260	CD2	PHE A 379	9.133	-1.974	27.858	1.00	14.44	C
	ATOM	2261	CE1	PHE A 379	8.043	-2.343	25.351	1.00	11.61	C
50	ATOM	2262	CE2	PHE A 379	8.038	-2.797	27.688	1.00	14.53	C
	ATOM	2263	CZ	PHE A 379	7.485	-2.989	26.438	1.00	12.96	C
	ATOM	2264	N	GLY A 380	13.236	0.896	25.024	1.00	11.68	N
	ATOM	2265	CA	GLY A 380	14.203	1.966	24.890	1.00	11.35	C
	ATOM	2266	C	GLY A 380	13.642	3.372	25.052	1.00	10.75	C
55	ATOM	2267	O	GLY A 380	12.589	3.562	25.653	1.00	12.44	O
	ATOM	2268	N	MET A 381	14.371	4.356	24.542	1.00	10.00	N
	ATOM	2269	CA	MET A 381	13.951	5.754	24.638	1.00	11.50	C
	ATOM	2270	C	MET A 381	12.514	5.941	24.142	1.00	15.24	C
	ATOM	2271	O	MET A 381	12.098	5.313	23.161	1.00	11.19	O
60	ATOM	2272	CB	MET A 381	14.891	6.660	23.871	1.00	14.46	C
	ATOM	2273	CG	MET A 381	16.286	6.838	24.438	1.00	18.95	C
	ATOM	2274	SD	MET A 381	17.272	7.998	23.460	1.00	25.67	S
	ATOM	2275	CE	MET A 381	17.087	7.233	21.849	1.00	19.92	C
	ATOM	2276	N	ARG A 382	11.739	6.762	24.866	1.00	15.63	N
65	ATOM	2277	CA	ARG A 382	10.352	6.961	24.460	1.00	16.59	C
	ATOM	2278	C	ARG A 382	10.304	7.814	23.195	1.00	12.90	C
	ATOM	2279	O	ARG A 382	11.136	8.698	23.019	1.00	11.25	O
	ATOM	2280	CB	ARG A 382	9.514	7.662	25.518	1.00	19.99	C
	ATOM	2281	CG	ARG A 382	9.720	7.274	26.957	1.00	24.88	C
70	ATOM	2282	CD	ARG A 382	9.828	5.763	27.161	1.00	25.60	C
	ATOM	2283	NE	ARG A 382	10.101	5.566	28.556	1.00	31.36	N
	ATOM	2284	CZ	ARG A 382	11.039	4.880	29.179	1.00	28.51	C

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      ATOM   2285   NH1 ARG A 382     11.966    4.178   28.552  1.00 23.21       N
      ATOM   2286   NH2 ARG A 382     10.969    4.919   30.500  1.00 26.26       N
      ATOM   2287   N   PRO A 383      9.266    7.621   22.394  1.00 12.79       N
      ATOM   2288   CA  PRO A 383      9.091    8.404   21.184  1.00  9.96       C
   5  ATOM   2289   C   PRO A 383      9.132    9.890   21.451  1.00 12.67       C
      ATOM   2290   O   PRO A 383      8.525   10.380   22.418  1.00 10.47       O
      ATOM   2291   CB  PRO A 383      7.730    7.972   20.634  1.00  9.92       C
      ATOM   2292   CG  PRO A 383      7.528    6.596   21.190  1.00 12.01       C
      ATOM   2293   CD  PRO A 383      8.233    6.575   22.534  1.00 11.26       C
  10  ATOM   2294   N   THR A 384      9.863   10.615   20.604  1.00  9.35       N
      ATOM   2295   CA  THR A 384      9.954   12.066   20.773  1.00 13.08       C
      ATOM   2296   C   THR A 384     10.452   12.740   19.509  1.00 11.46       C
      ATOM   2297   O   THR A 384     11.211   12.154   18.744  1.00 11.29       O
      ATOM   2298   CB  THR A 384     10.902   12.393   21.951  1.00 13.60       C
  15  ATOM   2299   OG1 THR A 384     11.023   13.815   22.086  1.00 14.44       O
      ATOM   2300   CG2 THR A 384     12.291   11.815   21.716  1.00 17.66       C
      ATOM   2301   N   ALA A 385     10.043   13.980   19.281  1.00 11.36       N
      ATOM   2302   CA  ALA A 385     10.497   14.786   18.172  1.00 14.24       C
      ATOM   2303   C   ALA A 385     11.754   15.560   18.587  1.00 16.91       C
  20  ATOM   2304   O   ALA A 385     12.389   16.192   17.754  1.00 18.52       O
      ATOM   2305   CB  ALA A 385      9.420   15.795   17.767  1.00 16.27       C
      ATOM   2306   N   ASN A 386     12.093   15.543   19.873  1.00 16.95       N
      ATOM   2307   CA  ASN A 386     13.268   16.270   20.367  1.00 19.41       C
      ATOM   2308   C   ASN A 386     14.431   15.314   20.530  1.00 17.81       C
  25  ATOM   2309   O   ASN A 386     14.702   14.797   21.613  1.00 17.23       O
      ATOM   2310   CB  ASN A 386     12.912   16.972   21.688  1.00 21.90       C
      ATOM   2311   CG  ASN A 386     11.843   18.014   21.413  1.00 22.31       C
      ATOM   2312   OD1 ASN A 386     10.682   17.896   21.800  1.00 26.34       O
      ATOM   2313   ND2 ASN A 386     12.231   19.061   20.702  1.00 26.26       N
  30  ATOM   2314   N   THR A 387     15.106   15.013   19.414  1.00 14.34       N
      ATOM   2315   CA  THR A 387     16.162   14.019   19.418  1.00 15.21       C
      ATOM   2316   C   THR A 387     17.556   14.542   19.710  1.00 17.75       C
      ATOM   2317   O   THR A 387     18.457   13.726   19.874  1.00 17.94       O
      ATOM   2318   CB  THR A 387     16.211   13.380   17.996  1.00 15.42       C
  35  ATOM   2319   OG1 THR A 387     16.616   14.412   17.106  1.00 14.59       O
      ATOM   2320   CG2 THR A 387     14.827   12.893   17.609  1.00 13.57       C
      ATOM   2321   N   GLY A 388     17.755   15.851   19.622  1.00 19.77       N
      ATOM   2322   CA  GLY A 388     19.091   16.415   19.810  1.00 23.06       C
      ATOM   2323   C   GLY A 388     19.990   16.134   18.604  1.00 24.03       C
  40  ATOM   2324   O   GLY A 388     21.211   16.262   18.719  1.00 26.20       O
      ATOM   2325   N   HIS A 389     19.414   15.755   17.457  1.00 19.40       N
      ATOM   2326   CA  HIS A 389     20.235   15.493   16.279  1.00 14.57       C
      ATOM   2327   C   HIS A 389     19.573   16.090   15.049  1.00 14.06       C
      ATOM   2328   O   HIS A 389     18.457   15.686   14.675  1.00 12.99       O
  45  ATOM   2329   CB  HIS A 389     20.455   13.979   16.134  1.00 13.55       C
      ATOM   2330   CG  HIS A 389     21.619   13.721   15.216  1.00 13.99       C
      ATOM   2331   ND1 HIS A 389     21.618   14.056   13.881  1.00 13.44       N
      ATOM   2332   CD2 HIS A 389     22.833   13.177   15.477  1.00 12.87       C
      ATOM   2333   CE1 HIS A 389     22.791   13.732   13.345  1.00 12.87       C
  50  ATOM   2334   NE2 HIS A 389     23.540   13.187   14.298  1.00 13.79       N
      ATOM   2335   N   GLN A 390     20.283   16.950   14.333  1.00 14.11       N
      ATOM   2336   CA  GLN A 390     19.743   17.625   13.162  1.00 16.20       C
      ATOM   2337   C   GLN A 390     19.160   16.703   12.094  1.00 13.84       C
      ATOM   2338   O   GLN A 390     18.334   17.173   11.298  1.00 13.37       O
  55  ATOM   2339   CB  GLN A 390     20.825   18.499   12.505  1.00 20.15       C
      ATOM   2340   CG  GLN A 390     22.088   17.753   12.106  1.00 31.09       C
      ATOM   2341   CD  GLN A 390     23.248   18.648   11.720  1.00 35.92       C
      ATOM   2342   OE1 GLN A 390     24.432   18.318   11.849  1.00 37.48       O
      ATOM   2343   NE2 GLN A 390     22.936   19.850   11.225  1.00 36.68       N
  60  ATOM   2344   N   TYR A 391     19.663   15.492   11.932  1.00 12.67       N
      ATOM   2345   CA  TYR A 391     19.258   14.578   10.877  1.00 14.48       C
      ATOM   2346   C   TYR A 391     18.093   13.650   11.228  1.00 14.99       C
      ATOM   2347   O   TYR A 391     17.606   12.886   10.378  1.00 12.39       O
      ATOM   2348   CB  TYR A 391     20.432   13.624   10.597  1.00 15.46       C
  65  ATOM   2349   CG  TYR A 391     21.663   14.210    9.962  1.00 17.10       C
      ATOM   2350   CD1 TYR A 391     21.685   15.479    9.402  1.00 18.66       C
      ATOM   2351   CD2 TYR A 391     22.824   13.441    9.903  1.00 19.40       C
      ATOM   2352   CE1 TYR A 391     22.840   15.979    8.823  1.00 18.42       C
      ATOM   2353   CE2 TYR A 391     23.986   13.928    9.325  1.00 20.24       C
  70  ATOM   2354   CZ  TYR A 391     23.972   15.200    8.787  1.00 21.11       C
      ATOM   2355   OH  TYR A 391     25.126   15.679    8.205  1.00 19.62       O
      ATOM   2356   N   VAL A 392     17.730   13.651   12.493  1.00 12.39       N
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	ATOM	2357	CA	VAL	A	392	16.714	12.748	13.032	1.00	13.23	C
	ATOM	2358	C	VAL	A	392	15.480	13.506	13.492	1.00	14.92	C
	ATOM	2359	O	VAL	A	392	15.499	14.238	14.490	1.00	14.52	O
	ATOM	2360	CB	VAL	A	392	17.309	11.938	14.201	1.00	11.35	C
5	ATOM	2361	CG1	VAL	A	392	16.324	10.883	14.711	1.00	11.19	C
	ATOM	2362	CG2	VAL	A	392	18.627	11.253	13.840	1.00	10.63	C
	ATOM	2363	N	ASP	A	393	14.363	13.331	12.773	1.00	14.20	N
	ATOM	2364	CA	ASP	A	393	13.107	13.965	13.153	1.00	12.15	C
	ATOM	2365	C	ASP	A	393	12.552	13.363	14.449	1.00	10.46	C
10	ATOM	2366	O	ASP	A	393	11.886	14.075	15.197	1.00	10.32	O
	ATOM	2367	CB	ASP	A	393	12.004	13.759	12.120	1.00	10.53	C
	ATOM	2368	CG	ASP	A	393	12.166	14.596	10.878	1.00	10.53	C
	ATOM	2369	OD1	ASP	A	393	12.859	15.627	10.979	1.00	10.17	O
	ATOM	2370	OD2	ASP	A	393	11.618	14.244	9.812	1.00	9.58	O
15	ATOM	2371	N	ALA	A	394	12.782	12.067	14.665	1.00	9.78	N
	ATOM	2372	CA	ALA	A	394	12.242	11.484	15.881	1.00	10.04	C
	ATOM	2373	C	ALA	A	394	12.788	10.096	16.175	1.00	10.84	C
	ATOM	2374	O	ALA	A	394	13.199	9.323	15.326	1.00	11.29	O
	ATOM	2375	CB	ALA	A	394	10.717	11.284	15.756	1.00	8.93	C
20	ATOM	2376	N	PHE	A	395	12.704	9.829	17.474	1.00	11.98	N
	ATOM	2377	CA	PHE	A	395	12.906	8.457	17.939	1.00	10.32	C
	ATOM	2378	C	PHE	A	395	11.474	7.927	18.057	1.00	9.70	C
	ATOM	2379	O	PHE	A	395	10.594	8.655	18.502	1.00	8.96	O
	ATOM	2380	CB	PHE	A	395	13.572	8.451	19.292	1.00	10.45	C
25	ATOM	2381	CG	PHE	A	395	15.013	8.896	19.186	1.00	11.98	C
	ATOM	2382	CD1	PHE	A	395	15.872	8.196	18.372	1.00	13.78	C
	ATOM	2383	CD2	PHE	A	395	15.486	9.985	19.886	1.00	17.42	C
	ATOM	2384	CE1	PHE	A	395	17.201	8.543	18.243	1.00	17.08	C
	ATOM	2385	CE2	PHE	A	395	16.817	10.357	19.774	1.00	16.11	C
30	ATOM	2386	CZ	PHE	A	395	17.670	9.639	18.950	1.00	17.10	C
	ATOM	2387	N	VAL	A	396	11.281	6.697	17.603	1.00	9.89	N
	ATOM	2388	CA	VAL	A	396	9.938	6.133	17.603	1.00	7.78	C
	ATOM	2389	C	VAL	A	396	9.928	4.693	18.058	1.00	8.54	C
	ATOM	2390	O	VAL	A	396	10.959	4.061	18.276	1.00	8.53	O
35	ATOM	2391	CB	VAL	A	396	9.408	6.161	16.138	1.00	8.91	C
	ATOM	2392	CG1	VAL	A	396	9.009	7.571	15.714	1.00	7.56	C
	ATOM	2393	CG2	VAL	A	396	10.490	5.628	15.199	1.00	3.68	C
	ATOM	2394	N	TRP	A	397	8.725	4.157	18.225	1.00	7.98	N
	ATOM	2395	CA	TRP	A	397	8.534	2.751	18.552	1.00	8.13	C
40	ATOM	2396	C	TRP	A	397	7.758	2.176	17.359	1.00	9.21	C
	ATOM	2397	O	TRP	A	397	6.548	2.351	17.308	1.00	6.97	O
	ATOM	2398	CB	TRP	A	397	7.771	2.525	19.848	1.00	11.38	C
	ATOM	2399	CG	TRP	A	397	8.576	2.758	21.096	1.00	11.04	C
	ATOM	2400	CD1	TRP	A	397	9.732	3.467	21.257	1.00	12.89	C
45	ATOM	2401	CD2	TRP	A	397	8.232	2.286	22.409	1.00	11.85	C
	ATOM	2402	NE1	TRP	A	397	10.148	3.453	22.564	1.00	10.85	N
	ATOM	2403	CE2	TRP	A	397	9.240	2.719	23.285	1.00	11.47	C
	ATOM	2404	CE3	TRP	A	397	7.160	1.532	22.912	1.00	10.65	C
	ATOM	2405	CZ2	TRP	A	397	9.205	2.435	24.650	1.00	11.88	C
50	ATOM	2406	CZ3	TRP	A	397	7.138	1.234	24.268	1.00	12.02	C
	ATOM	2407	CH2	TRP	A	397	8.150	1.690	25.104	1.00	10.05	C
	ATOM	2408	N	VAL	A	398	8.495	1.530	16.442	1.00	7.88	N
	ATOM	2409	CA	VAL	A	398	7.776	1.037	15.254	1.00	5.08	C
	ATOM	2410	C	VAL	A	398	7.208	-0.352	15.494	1.00	7.54	C
55	ATOM	2411	O	VAL	A	398	6.004	-0.563	15.334	1.00	7.53	O
	ATOM	2412	CB	VAL	A	398	8.663	1.122	14.004	1.00	6.33	C
	ATOM	2413	CG1	VAL	A	398	7.796	0.803	12.781	1.00	7.56	C
	ATOM	2414	CG2	VAL	A	398	9.301	2.503	13.889	1.00	6.40	C
	ATOM	2415	N	LYS	A	399	8.053	-1.312	15.862	1.00	6.71	N
60	ATOM	2416	CA	LYS	A	399	7.582	-2.655	16.241	1.00	9.29	C
	ATOM	2417	C	LYS	A	399	7.132	-2.548	17.698	1.00	6.47	C
	ATOM	2418	O	LYS	A	399	7.938	-2.143	18.536	1.00	9.48	O
	ATOM	2419	CB	LYS	A	399	8.778	-3.614	16.122	1.00	8.35	C
	ATOM	2420	CG	LYS	A	399	8.585	-4.990	16.741	1.00	11.13	C
65	ATOM	2421	CD	LYS	A	399	7.431	-5.741	16.061	1.00	12.42	C
	ATOM	2422	CE	LYS	A	399	7.109	-7.014	16.824	1.00	10.44	C
	ATOM	2423	NZ	LYS	A	399	6.193	-7.900	16.051	1.00	14.39	N
	ATOM	2424	N	PRO	A	400	5.876	-2.823	18.016	1.00	7.37	N
	ATOM	2425	CA	PRO	A	400	5.364	-2.695	19.371	1.00	8.03	C
70	ATOM	2426	C	PRO	A	400	5.914	-3.786	20.282	1.00	9.27	C
	ATOM	2427	O	PRO	A	400	5.556	-4.936	20.058	1.00	7.71	O
	ATOM	2428	CB	PRO	A	400	3.845	-2.797	19.194	1.00	9.60	C

	ATOM	2429	CG	PRO A 400	3.626	-2.535	17.731	1.00	9.49	C
	ATOM	2430	CD	PRO A 400	4.815	-3.254	17.071	1.00	7.21	C
	ATOM	2431	N	GLY A 401	6.840	-3.470	21.163	1.00	9.35	N
	ATOM	2432	CA	GLY A 401	7.481	-4.482	22.015	1.00	10.39	C
5	ATOM	2433	C	GLY A 401	6.416	-5.254	22.797	1.00	10.56	C
	ATOM	2434	O	GLY A 401	5.572	-4.651	23.440	1.00	10.17	O
	ATOM	2435	N	GLY A 402	6.502	-6.578	22.746	1.00	12.76	N
	ATOM	2436	CA	GLY A 402	5.533	-7.434	23.424	1.00	11.36	C
	ATOM	2437	C	GLY A 402	4.747	-8.227	22.379	1.00	14.25	C
10	ATOM	2438	O	GLY A 402	4.255	-9.313	22.683	1.00	14.26	O
	ATOM	2439	N	GLU A 403	4.627	-7.697	21.160	1.00	13.06	N
	ATOM	2440	CA	GLU A 403	3.989	-8.425	20.060	1.00	12.73	C
	ATOM	2441	C	GLU A 403	5.086	-9.268	19.399	1.00	12.75	C
	ATOM	2442	O	GLU A 403	6.158	-8.763	19.089	1.00	11.76	O
15	ATOM	2443	CB	GLU A 403	3.323	-7.492	19.035	1.00	11.21	C
	ATOM	2444	CG	GLU A 403	2.201	-6.714	19.718	1.00	14.19	C
	ATOM	2445	CD	GLU A 403	1.454	-5.720	18.847	1.00	15.93	C
	ATOM	2446	OE1	GLU A 403	1.824	-5.584	17.674	1.00	12.13	O
	ATOM	2447	OE2	GLU A 403	0.493	-5.084	19.329	1.00	14.54	O
20	ATOM	2448	N	CYS A 404	4.817	-10.548	19.226	1.00	11.86	N
	ATOM	2449	CA	CYS A 404	5.763	-11.506	18.724	1.00	13.61	C
	ATOM	2450	C	CYS A 404	6.329	-11.302	17.327	1.00	13.64	C
	ATOM	2451	O	CYS A 404	5.632	-10.838	16.440	1.00	12.45	O
	ATOM	2452	CB	CYS A 404	5.069	-12.891	18.731	1.00	10.78	C
25	ATOM	2453	SG	CYS A 404	6.348	-14.186	18.843	1.00	10.02	S
	ATOM	2454	N	ASP A 405	7.568	-11.748	17.139	1.00	12.58	N
	ATOM	2455	CA	ASP A 405	8.211	-11.697	15.830	1.00	11.30	C
	ATOM	2456	C	ASP A 405	7.958	-12.975	15.041	1.00	12.96	C
	ATOM	2457	O	ASP A 405	8.143	-12.984	13.822	1.00	11.87	O
30	ATOM	2458	CB	ASP A 405	9.722	-11.515	16.026	1.00	12.67	C
	ATOM	2459	CG	ASP A 405	10.085	-10.167	16.588	1.00	14.88	C
	ATOM	2460	OD1	ASP A 405	9.501	-9.124	16.182	1.00	13.52	O
	ATOM	2461	OD2	ASP A 405	10.960	-10.152	17.483	1.00	12.49	O
	ATOM	2462	N	GLY A 406	7.571	-14.072	15.703	1.00	11.55	N
35	ATOM	2463	CA	GLY A 406	7.388	-15.337	15.012	1.00	10.92	C
	ATOM	2464	C	GLY A 406	7.336	-16.513	15.991	1.00	11.09	C
	ATOM	2465	O	GLY A 406	7.907	-16.438	17.082	1.00	10.50	O
	ATOM	2466	N	THR A 407	6.621	-17.564	15.592	1.00	12.63	N
	ATOM	2467	CA	THR A 407	6.463	-18.725	16.472	1.00	13.63	C
40	ATOM	2468	C	THR A 407	7.768	-19.496	16.592	1.00	13.58	C
	ATOM	2469	O	THR A 407	8.543	-19.531	15.636	1.00	14.00	O
	ATOM	2470	CB	THR A 407	5.363	-19.678	15.962	1.00	14.88	C
	ATOM	2471	OG1	THR A 407	5.269	-20.817	16.832	1.00	15.36	O
	ATOM	2472	CG2	THR A 407	5.642	-20.164	14.551	1.00	12.17	C
45	ATOM	2473	N	SER A 408	7.998	-20.112	17.758	1.00	13.91	N
	ATOM	2474	CA	SER A 408	9.200	-20.921	17.934	1.00	13.96	C
	ATOM	2475	C	SER A 408	8.883	-22.394	17.664	1.00	18.94	C
	ATOM	2476	O	SER A 408	9.746	-23.266	17.777	1.00	18.78	O
	ATOM	2477	CB	SER A 408	9.773	-20.761	19.340	1.00	17.90	C
50	ATOM	2478	OG	SER A 408	8.765	-21.027	20.306	1.00	21.37	O
	ATOM	2479	N	ASP A 409	7.614	-22.691	17.383	1.00	18.86	N
	ATOM	2480	CA	ASP A 409	7.227	-24.074	17.088	1.00	20.41	C
	ATOM	2481	C	ASP A 409	7.796	-24.460	15.732	1.00	21.46	C
	ATOM	2482	O	ASP A 409	7.283	-24.085	14.674	1.00	21.42	O
55	ATOM	2483	CB	ASP A 409	5.719	-24.246	17.124	1.00	19.32	C
	ATOM	2484	CG	ASP A 409	5.209	-25.619	16.735	1.00	19.94	C
	ATOM	2485	OD1	ASP A 409	5.950	-26.476	16.230	1.00	18.83	O
	ATOM	2486	OD2	ASP A 409	3.992	-25.837	16.926	1.00	22.26	O
	ATOM	2487	N	THR A 410	8.814	-25.319	15.731	1.00	20.78	N
60	ATOM	2488	CA	THR A 410	9.483	-25.741	14.511	1.00	20.71	C
	ATOM	2489	C	THR A 410	8.594	-26.480	13.529	1.00	20.75	C
	ATOM	2490	O	THR A 410	8.950	-26.616	12.341	1.00	21.83	O
	ATOM	2491	CB	THR A 410	10.740	-26.587	14.805	1.00	22.31	C
	ATOM	2492	OG1	THR A 410	10.353	-27.871	15.314	1.00	21.56	O
65	ATOM	2493	CG2	THR A 410	11.635	-25.916	15.836	1.00	19.75	C
	ATOM	2494	N	THR A 411	7.457	-26.997	13.952	1.00	21.25	N
	ATOM	2495	CA	THR A 411	6.543	-27.698	13.067	1.00	21.65	C
	ATOM	2496	C	THR A 411	5.487	-26.771	12.469	1.00	20.71	C
	ATOM	2497	O	THR A 411	4.799	-27.221	11.556	1.00	20.88	O
70	ATOM	2498	CB	THR A 411	5.826	-28.862	13.785	1.00	24.84	C
	ATOM	2499	OG1	THR A 411	4.821	-28.357	14.673	1.00	24.15	O
	ATOM	2500	CG2	THR A 411	6.840	-29.693	14.565	1.00	24.12	C

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     ATOM   2501  N   ALA A 412      5.368 -25.533  12.934  1.00 18.34           N
     ATOM   2502  CA  ALA A 412      4.351 -24.629  12.395  1.00 17.63           C
     ATOM   2503  C   ALA A 412      4.635 -24.172  10.973  1.00 18.97           C
     ATOM   2504  O   ALA A 412      5.764 -23.901  10.561  1.00 15.98           O
  5  ATOM   2505  CB  ALA A 412      4.192 -23.407  13.292  1.00 18.31           C
     ATOM   2506  N   ALA A 413      3.575 -24.031  10.184  1.00 17.60           N
     ATOM   2507  CA  ALA A 413      3.653 -23.587   8.805  1.00 21.03           C
     ATOM   2508  C   ALA A 413      4.491 -22.321   8.632  1.00 21.07           C
     ATOM   2509  O   ALA A 413      5.343 -22.276   7.737  1.00 22.24           O
 10  ATOM   2510  CB  ALA A 413      2.245 -23.281   8.288  1.00 18.70           C
     ATOM   2511  N   ARG A 414      4.275 -21.317   9.477  1.00 18.99           N
     ATOM   2512  CA  ARG A 414      5.015 -20.061   9.328  1.00 19.30           C
     ATOM   2513  C   ARG A 414      6.351 -19.995  10.047  1.00 19.29           C
     ATOM   2514  O   ARG A 414      6.942 -18.912  10.163  1.00 15.93           O
 15  ATOM   2515  CB  ARG A 414      4.102 -18.916   9.809  1.00 22.81           C
     ATOM   2516  CG AARG A 414      2.677 -19.063   9.278  0.50 20.76           C
     ATOM   2517  CG BARG A 414      2.786 -18.787   9.061  0.50 24.56           C
     ATOM   2518  CD AARG A 414      1.943 -17.737   9.281  0.50 22.28           C
     ATOM   2519  CD BARG A 414      1.923 -17.686   9.673  0.50 26.51           C
 20  ATOM   2520  NE AARG A 414      1.743 -17.207  10.620  0.50 18.79           N
     ATOM   2521  NE BARG A 414      0.679 -17.499   8.942  0.50 27.44           N
     ATOM   2522  CZ AARG A 414      1.418 -15.944  10.873  0.50 20.76           C
     ATOM   2523  CZ BARG A 414      0.472 -16.727   7.885  0.50 30.07           C
     ATOM   2524  NH1AARG A 414      1.277 -15.085   9.866  0.50 21.84           N
 25  ATOM   2525  NH1BARG A 414      1.434 -15.980   7.357  0.50 30.38           N
     ATOM   2526  NH2AARG A 414      1.246 -15.526  12.118  0.50 17.69           N
     ATOM   2527  NH2BARG A 414     -0.737 -16.674   7.336  0.50 30.89           N
     ATOM   2528  N   TYR A 415      6.851 -21.123  10.551  1.00 16.76           N
     ATOM   2529  CA  TYR A 415      8.092 -21.127  11.305  1.00 16.15           C
 30  ATOM   2530  C   TYR A 415      9.283 -20.586  10.525  1.00 15.10           C
     ATOM   2531  O   TYR A 415      9.565 -21.006   9.408  1.00 14.92           O
     ATOM   2532  CB  TYR A 415      8.404 -22.559  11.775  1.00 14.85           C
     ATOM   2533  CG  TYR A 415      9.711 -22.671  12.527  1.00 14.79           C
     ATOM   2534  CD1 TYR A 415      9.840 -22.118  13.791  1.00 14.80           C
 35  ATOM   2535  CD2 TYR A 415     10.807 -23.310  11.974  1.00 16.26           C
     ATOM   2536  CE1 TYR A 415     11.029 -22.213  14.501  1.00 17.75           C
     ATOM   2537  CE2 TYR A 415     12.001 -23.410  12.666  1.00 16.07           C
     ATOM   2538  CZ  TYR A 415     12.102 -22.857  13.929  1.00 15.93           C
     ATOM   2539  OH  TYR A 415     13.272 -22.955  14.629  1.00 15.69           O
 40  ATOM   2540  N   ASP A 416     10.028 -19.692  11.161  1.00 14.36           N
     ATOM   2541  CA  ASP A 416     11.270 -19.162  10.595  1.00 15.54           C
     ATOM   2542  C   ASP A 416     12.364 -19.687  11.520  1.00 15.69           C
     ATOM   2543  O   ASP A 416     12.244 -19.414  12.727  1.00 15.39           O
     ATOM   2544  CB  ASP A 416     11.263 -17.629  10.596  1.00 13.93           C
 45  ATOM   2545  CG  ASP A 416     12.503 -17.056   9.930  1.00 17.71           C
     ATOM   2546  OD1 ASP A 416     13.645 -17.413  10.296  1.00 14.36           O
     ATOM   2547  OD2 ASP A 416     12.319 -16.230   9.005  1.00 16.35           O
     ATOM   2548  N   TYR A 417     13.418 -20.349  11.056  1.00 14.52           N
     ATOM   2549  CA  TYR A 417     14.439 -20.884  11.946  1.00 15.93           C
 50  ATOM   2550  C   TYR A 417     15.086 -19.865  12.865  1.00 14.32           C
     ATOM   2551  O   TYR A 417     15.628 -20.217  13.939  1.00 14.33           O
     ATOM   2552  CB  TYR A 417     15.540 -21.642  11.168  1.00 16.81           C
     ATOM   2553  CG  TYR A 417     16.541 -20.724  10.494  1.00 20.04           C
     ATOM   2554  CD1 TYR A 417     17.627 -20.235  11.208  1.00 20.88           C
 55  ATOM   2555  CD2 TYR A 417     16.400 -20.328   9.171  1.00 21.55           C
     ATOM   2556  CE1 TYR A 417     18.541 -19.371  10.638  1.00 20.95           C
     ATOM   2557  CE2 TYR A 417     17.325 -19.485   8.582  1.00 22.81           C
     ATOM   2558  CZ  TYR A 417     18.395 -19.023   9.314  1.00 21.34           C
     ATOM   2559  OH  TYR A 417     19.311 -18.175   8.744  1.00 23.68           O
 60  ATOM   2560  N   HIS A 418     15.130 -18.583  12.513  1.00 10.49           N
     ATOM   2561  CA  HIS A 418     15.625 -17.553  13.424  1.00 10.60           C
     ATOM   2562  C   HIS A 418     14.864 -17.517  14.745  1.00 11.16           C
     ATOM   2563  O   HIS A 418     15.403 -17.133  15.785  1.00 11.75           O
     ATOM   2564  CB  HIS A 418     15.527 -16.146  12.805  1.00 12.33           C
 65  ATOM   2565  CG  HIS A 418     16.405 -15.928  11.618  1.00 13.49           C
     ATOM   2566  ND1 HIS A 418     15.984 -16.202  10.344  1.00 14.03           N
     ATOM   2567  CD2 HIS A 418     17.678 -15.457  11.512  1.00 17.01           C
     ATOM   2568  CE1 HIS A 418     16.951 -15.914   9.484  1.00 17.13           C
     ATOM   2569  NE2 HIS A 418     17.973 -15.463  10.166  1.00 17.38           N
 70  ATOM   2570  N   CYS A 419     13.593 -17.920  14.773  1.00 11.97           N
     ATOM   2571  CA  CYS A 419     12.797 -17.924  15.985  1.00 11.38           C
     ATOM   2572  C   CYS A 419     13.059 -19.153  16.851  1.00 13.76           C
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	ATOM	2573	O	CYS A 419	12.586	-19.168	17.988	1.00	15.28	O
	ATOM	2574	CB	CYS A 419	11.311	-17.770	15.624	1.00	14.89	C
	ATOM	2575	SG	CYS A 419	11.078	-16.183	14.736	1.00	9.92	S
	ATOM	2576	N	GLY A 420	13.820	-20.128	16.385	1.00	14.63	N
5	ATOM	2577	CA	GLY A 420	14.216	-21.270	17.192	1.00	17.14	C
	ATOM	2578	C	GLY A 420	15.661	-21.199	17.670	1.00	17.33	C
	ATOM	2579	O	GLY A 420	16.100	-22.119	18.379	1.00	18.09	O
	ATOM	2580	N	LEU A 421	16.413	-20.130	17.439	1.00	16.44	N
	ATOM	2581	CA	LEU A 421	17.797	-20.054	17.897	1.00	17.26	C
10	ATOM	2582	C	LEU A 421	17.883	-19.936	19.418	1.00	17.93	C
	ATOM	2583	O	LEU A 421	16.933	-19.554	20.111	1.00	15.23	O
	ATOM	2584	CB	LEU A 421	18.490	-18.850	17.252	1.00	19.03	C
	ATOM	2585	CG	LEU A 421	18.537	-18.852	15.714	1.00	18.09	C
	ATOM	2586	CD1	LEU A 421	19.043	-17.505	15.216	1.00	15.42	C
15	ATOM	2587	CD2	LEU A 421	19.391	-20.003	15.222	1.00	16.17	C
	ATOM	2588	N	GLU A 422	19.077	-20.155	19.955	1.00	19.82	N
	ATOM	2589	CA	GLU A 422	19.362	-20.089	21.379	1.00	21.55	C
	ATOM	2590	C	GLU A 422	19.103	-18.731	22.009	1.00	18.27	C
	ATOM	2591	O	GLU A 422	18.814	-18.633	23.210	1.00	18.28	O
20	ATOM	2592	CB	GLU A 422	20.816	-20.501	21.680	1.00	28.44	C
	ATOM	2593	CG	GLU A 422	21.858	-19.465	21.298	1.00	34.64	C
	ATOM	2594	CD	GLU A 422	23.283	-19.756	21.724	1.00	40.13	C
	ATOM	2595	OE1	GLU A 422	23.508	-20.174	22.884	1.00	40.63	O
	ATOM	2596	OE2	GLU A 422	24.200	-19.557	20.890	1.00	39.34	O
25	ATOM	2597	N	ASP A 423	19.199	-17.648	21.248	1.00	15.87	N
	ATOM	2598	CA	ASP A 423	18.961	-16.326	21.824	1.00	15.75	C
	ATOM	2599	C	ASP A 423	17.572	-15.788	21.516	1.00	14.49	C
	ATOM	2600	O	ASP A 423	17.354	-14.575	21.628	1.00	13.81	O
	ATOM	2601	CB	ASP A 423	20.051	-15.348	21.374	1.00	14.73	C
30	ATOM	2602	CG	ASP A 423	20.189	-15.332	19.865	1.00	17.03	C
	ATOM	2603	OD1	ASP A 423	19.298	-15.870	19.164	1.00	18.38	O
	ATOM	2604	OD2	ASP A 423	21.185	-14.765	19.375	1.00	18.33	O
	ATOM	2605	N	ALA A 424	16.653	-16.628	21.073	1.00	15.63	N
	ATOM	2606	CA	ALA A 424	15.267	-16.220	20.826	1.00	15.39	C
35	ATOM	2607	C	ALA A 424	14.431	-16.759	21.990	1.00	16.55	C
	ATOM	2608	O	ALA A 424	14.564	-17.940	22.324	1.00	15.95	O
	ATOM	2609	CB	ALA A 424	14.740	-16.793	19.521	1.00	14.10	C
	ATOM	2610	N	LEU A 425	13.624	-15.918	22.605	1.00	14.20	N
	ATOM	2611	CA	LEU A 425	12.811	-16.351	23.734	1.00	17.25	C
40	ATOM	2612	C	LEU A 425	11.750	-17.347	23.322	1.00	16.76	C
	ATOM	2613	O	LEU A 425	11.023	-17.180	22.338	1.00	14.13	O
	ATOM	2614	CB	LEU A 425	12.173	-15.139	24.432	1.00	14.23	C
	ATOM	2615	CG	LEU A 425	11.530	-15.462	25.794	1.00	16.28	C
	ATOM	2616	CD1	LEU A 425	12.589	-15.822	26.830	1.00	13.47	C
45	ATOM	2617	CD2	LEU A 425	10.699	-14.276	26.275	1.00	11.04	C
	ATOM	2618	N	LYS A 426	11.687	-18.484	24.030	1.00	19.88	N
	ATOM	2619	CA	LYS A 426	10.716	-19.525	23.688	1.00	21.65	C
	ATOM	2620	C	LYS A 426	10.037	-20.042	24.957	1.00	24.87	C
	ATOM	2621	O	LYS A 426	10.554	-19.857	26.061	1.00	25.02	O
50	ATOM	2622	CB	LYS A 426	11.353	-20.704	22.973	1.00	22.22	C
	ATOM	2623	CG	LYS A 426	12.301	-20.470	21.820	1.00	25.86	C
	ATOM	2624	CD	LYS A 426	13.131	-21.720	21.534	1.00	24.57	C
	ATOM	2625	CE	LYS A 426	14.537	-21.372	21.131	1.00	22.74	C
	ATOM	2626	NZ	LYS A 426	15.360	-20.784	22.223	1.00	19.12	N
55	ATOM	2627	N	PRO A 427	8.875	-20.650	24.779	1.00	24.38	N
	ATOM	2628	CA	PRO A 427	8.231	-20.812	23.484	1.00	23.90	C
	ATOM	2629	C	PRO A 427	7.534	-19.528	23.070	1.00	20.95	C
	ATOM	2630	O	PRO A 427	7.078	-18.785	23.937	1.00	21.24	O
	ATOM	2631	CB	PRO A 427	7.200	-21.915	23.737	1.00	25.67	C
60	ATOM	2632	CG	PRO A 427	6.778	-21.658	25.151	1.00	26.78	C
	ATOM	2633	CD	PRO A 427	8.050	-21.245	25.866	1.00	27.38	C
	ATOM	2634	N	ALA A 428	7.433	-19.256	21.776	1.00	17.93	N
	ATOM	2635	CA	ALA A 428	6.834	-18.004	21.307	1.00	17.59	C
	ATOM	2636	C	ALA A 428	5.612	-18.293	20.440	1.00	16.73	C
65	ATOM	2637	O	ALA A 428	5.598	-19.276	19.698	1.00	14.70	O
	ATOM	2638	CB	ALA A 428	7.896	-17.272	20.477	1.00	14.41	C
	ATOM	2639	N	PRO A 429	4.581	-17.459	20.552	1.00	16.24	N
	ATOM	2640	CA	PRO A 429	3.359	-17.630	19.782	1.00	15.56	C
	ATOM	2641	C	PRO A 429	3.503	-17.189	18.339	1.00	17.33	C
70	ATOM	2642	O	PRO A 429	4.597	-16.771	17.953	1.00	18.47	O
	ATOM	2643	CB	PRO A 429	2.370	-16.766	20.545	1.00	15.22	C
	ATOM	2644	CG	PRO A 429	3.202	-15.655	21.093	1.00	16.97	C

	ATOM	2645	CD	PRO	A	429	4.541	-16.273	21.445	1.00	14.34	C
	ATOM	2646	N	GLU	A	430	2.424	-17.134	17.555	1.00	17.54	N
	ATOM	2647	CA	GLU	A	430	2.515	-16.678	16.174	1.00	18.00	C
	ATOM	2648	C	GLU	A	430	2.930	-15.213	16.053	1.00	17.87	C
5	ATOM	2649	O	GLU	A	430	2.727	-14.430	16.984	1.00	16.31	O
	ATOM	2650	CB	GLU	A	430	1.178	-16.888	15.458	1.00	19.98	C
	ATOM	2651	CG	GLU	A	430	0.909	-18.344	15.123	1.00	23.53	C
	ATOM	2652	CD	GLU	A	430	1.798	-18.890	14.029	1.00	25.88	C
	ATOM	2653	OE1	GLU	A	430	2.298	-18.118	13.177	1.00	24.55	O
10	ATOM	2654	OE2	GLU	A	430	1.988	-20.125	14.001	1.00	23.45	O
	ATOM	2655	N	ALA	A	431	3.558	-14.862	14.928	1.00	14.19	N
	ATOM	2656	CA	ALA	A	431	3.987	-13.479	14.726	1.00	14.89	C
	ATOM	2657	C	ALA	A	431	2.811	-12.525	14.944	1.00	14.00	C
	ATOM	2658	O	ALA	A	431	1.729	-12.886	14.482	1.00	12.71	O
15	ATOM	2659	CB	ALA	A	431	4.454	-13.236	13.297	1.00	13.64	C
	ATOM	2660	N	GLY	A	432	3.016	-11.376	15.558	1.00	13.17	N
	ATOM	2661	CA	GLY	A	432	1.951	-10.409	15.763	1.00	13.80	C
	ATOM	2662	C	GLY	A	432	1.089	-10.628	16.996	1.00	17.04	C
	ATOM	2663	O	GLY	A	432	0.360	-9.710	17.409	1.00	16.26	O
20	ATOM	2664	N	GLN	A	433	1.144	-11.803	17.615	1.00	14.84	N
	ATOM	2665	CA	GLN	A	433	0.380	-12.142	18.801	1.00	16.45	C
	ATOM	2666	C	GLN	A	433	1.096	-11.700	20.060	1.00	14.64	C
	ATOM	2667	O	GLN	A	433	2.313	-11.528	20.066	1.00	15.80	O
	ATOM	2668	CB	GLN	A	433	0.121	-13.666	18.842	1.00	16.97	C
25	ATOM	2669	CG	GLN	A	433	-0.722	-14.148	17.672	1.00	21.15	C
	ATOM	2670	CD	GLN	A	433	-2.152	-13.657	17.859	1.00	26.58	C
	ATOM	2671	OE1	GLN	A	433	-2.785	-13.900	18.885	1.00	30.03	O
	ATOM	2672	NE2	GLN	A	433	-2.665	-12.937	16.878	1.00	27.04	N
	ATOM	2673	N	TRP	A	434	0.300	-11.412	21.091	1.00	13.63	N
30	ATOM	2674	CA	TRP	A	434	0.914	-10.957	22.328	1.00	13.82	C
	ATOM	2675	C	TRP	A	434	1.836	-12.050	22.868	1.00	14.46	C
	ATOM	2676	O	TRP	A	434	1.502	-13.228	22.850	1.00	10.69	O
	ATOM	2677	CB	TRP	A	434	-0.154	-10.593	23.346	1.00	15.85	C
	ATOM	2678	CG	TRP	A	434	0.428	-9.807	24.484	1.00	15.45	C
35	ATOM	2679	CD1	TRP	A	434	0.526	-10.224	25.782	1.00	16.09	C
	ATOM	2680	CD2	TRP	A	434	0.986	-8.495	24.434	1.00	15.80	C
	ATOM	2681	NE1	TRP	A	434	1.096	-9.237	26.546	1.00	15.71	N
	ATOM	2682	CE2	TRP	A	434	1.406	-8.170	25.737	1.00	15.27	C
	ATOM	2683	CE3	TRP	A	434	1.165	-7.546	23.413	1.00	13.90	C
40	ATOM	2684	CZ2	TRP	A	434	1.954	-6.928	26.064	1.00	13.43	C
	ATOM	2685	CZ3	TRP	A	434	1.730	-6.334	23.736	1.00	12.47	C
	ATOM	2686	CH2	TRP	A	434	2.113	-6.025	25.050	1.00	10.96	C
	ATOM	2687	N	PHE	A	435	3.007	-11.614	23.306	1.00	15.80	N
	ATOM	2688	CA	PHE	A	435	4.010	-12.527	23.875	1.00	17.64	C
45	ATOM	2689	C	PHE	A	435	4.340	-11.975	25.258	1.00	15.88	C
	ATOM	2690	O	PHE	A	435	5.267	-11.206	25.504	1.00	16.07	O
	ATOM	2691	CB	PHE	A	435	5.198	-12.625	22.948	1.00	16.11	C
	ATOM	2692	CG	PHE	A	435	6.263	-13.636	23.222	1.00	17.40	C
	ATOM	2693	CD1	PHE	A	435	6.222	-14.491	24.314	1.00	17.26	C
50	ATOM	2694	CD2	PHE	A	435	7.366	-13.698	22.372	1.00	13.51	C
	ATOM	2695	CE1	PHE	A	435	7.232	-15.406	24.545	1.00	16.81	C
	ATOM	2696	CE2	PHE	A	435	8.384	-14.610	22.607	1.00	18.11	C
	ATOM	2697	CZ	PHE	A	435	8.321	-15.462	23.693	1.00	16.99	C
	ATOM	2698	N	ASN	A	436	3.505	-12.379	26.236	1.00	14.43	N
55	ATOM	2699	CA	ASN	A	436	3.603	-11.789	27.558	1.00	15.23	C
	ATOM	2700	C	ASN	A	436	4.959	-11.953	28.216	1.00	13.48	C
	ATOM	2701	O	ASN	A	436	5.474	-10.996	28.800	1.00	15.55	O
	ATOM	2702	CB	ASN	A	436	2.453	-12.265	28.469	1.00	15.43	C
	ATOM	2703	CG	ASN	A	436	2.294	-11.217	29.567	1.00	21.94	C
60	ATOM	2704	OD1	ASN	A	436	2.047	-10.048	29.251	1.00	19.99	O
	ATOM	2705	ND2	ASN	A	436	2.495	-11.633	30.819	1.00	16.63	N
	ATOM	2706	N	GLU	A	437	5.575	-13.115	28.065	1.00	14.81	N
	ATOM	2707	CA	GLU	A	437	6.906	-13.383	28.615	1.00	16.35	C
	ATOM	2708	C	GLU	A	437	7.913	-12.371	28.067	1.00	15.03	C
65	ATOM	2709	O	GLU	A	437	8.773	-11.859	28.771	1.00	12.30	O
	ATOM	2710	CB	GLU	A	437	7.312	-14.802	28.223	1.00	20.49	C
	ATOM	2711	CG	GLU	A	437	6.478	-15.940	28.755	1.00	27.91	C
	ATOM	2712	CD	GLU	A	437	5.164	-16.216	28.064	1.00	31.40	C
	ATOM	2713	OE1	GLU	A	437	4.791	-15.602	27.043	1.00	27.37	O
70	ATOM	2714	OE2	GLU	A	437	4.424	-17.103	28.559	1.00	34.05	O
	ATOM	2715	N	TYR	A	438	7.784	-12.043	26.782	1.00	15.08	N
	ATOM	2716	CA	TYR	A	438	8.656	-11.055	26.150	1.00	14.63	C

	ATOM	2717	C	TYR A 438	8.387	-9.641	26.633	1.00	13.43	C
	ATOM	2718	O	TYR A 438	9.282	-8.804	26.842	1.00	12.18	O
	ATOM	2719	CB	TYR A 438	8.508	-11.159	24.615	1.00	12.75	C
	ATOM	2720	CG	TYR A 438	9.747	-10.558	23.964	1.00	13.57	C
5	ATOM	2721	CD1	TYR A 438	10.865	-11.352	23.764	1.00	13.67	C
	ATOM	2722	CD2	TYR A 438	9.792	-9.227	23.574	1.00	12.63	C
	ATOM	2723	CE1	TYR A 438	11.992	-10.814	23.176	1.00	11.80	C
	ATOM	2724	CE2	TYR A 438	10.918	-8.682	22.992	1.00	9.14	C
	ATOM	2725	CZ	TYR A 438	12.029	-9.495	22.807	1.00	10.92	C
10	ATOM	2726	OH	TYR A 438	13.167	-8.988	22.229	1.00	10.89	O
	ATOM	2727	N	PHE A 439	7.099	-9.312	26.821	1.00	12.19	N
	ATOM	2728	CA	PHE A 439	6.710	-8.006	27.329	1.00	10.75	C
	ATOM	2729	C	PHE A 439	7.365	-7.791	28.685	1.00	12.57	C
	ATOM	2730	O	PHE A 439	7.995	-6.774	28.939	1.00	12.06	O
15	ATOM	2731	CB	PHE A 439	5.174	-7.920	27.453	1.00	11.52	C
	ATOM	2732	CG	PHE A 439	4.700	-6.632	28.050	1.00	14.98	C
	ATOM	2733	CD1	PHE A 439	4.668	-5.480	27.283	1.00	12.52	C
	ATOM	2734	CD2	PHE A 439	4.299	-6.571	29.382	1.00	15.07	C
	ATOM	2735	CE1	PHE A 439	4.238	-4.270	27.792	1.00	10.83	C
20	ATOM	2736	CE2	PHE A 439	3.875	-5.360	29.902	1.00	15.85	C
	ATOM	2737	CZ	PHE A 439	3.837	-4.225	29.120	1.00	17.96	C
	ATOM	2738	N	ILE A 440	7.270	-8.800	29.564	1.00	13.60	N
	ATOM	2739	CA	ILE A 440	7.880	-8.684	30.899	1.00	15.56	C
	ATOM	2740	C	ILE A 440	9.379	-8.474	30.838	1.00	13.18	C
25	ATOM	2741	O	ILE A 440	9.933	-7.613	31.536	1.00	12.86	O
	ATOM	2742	CB	ILE A 440	7.449	-9.889	31.753	1.00	17.52	C
	ATOM	2743	CG1	ILE A 440	5.941	-9.728	32.037	1.00	20.09	C
	ATOM	2744	CG2	ILE A 440	8.219	-9.975	33.064	1.00	21.38	C
	ATOM	2745	CD1	ILE A 440	5.229	-11.002	32.413	1.00	26.81	C
30	ATOM	2746	N	GLN A 441	10.054	-9.168	29.935	1.00	15.58	N
	ATOM	2747	CA	GLN A 441	11.500	-9.003	29.745	1.00	13.59	C
	ATOM	2748	C	GLN A 441	11.819	-7.557	29.395	1.00	14.18	C
	ATOM	2749	O	GLN A 441	12.640	-6.877	30.021	1.00	12.66	O
	ATOM	2750	CB	GLN A 441	11.964	-9.943	28.630	1.00	14.14	C
35	ATOM	2751	CG	GLN A 441	13.398	-9.670	28.184	1.00	15.65	C
	ATOM	2752	CD	GLN A 441	13.776	-10.439	26.941	1.00	14.60	C
	ATOM	2753	OE1	GLN A 441	13.805	-11.662	26.927	1.00	14.87	O
	ATOM	2754	NE2	GLN A 441	14.084	-9.731	25.857	1.00	16.49	N
	ATOM	2755	N	LEU A 442	11.139	-7.043	28.368	1.00	14.07	N
40	ATOM	2756	CA	LEU A 442	11.309	-5.656	27.952	1.00	13.76	C
	ATOM	2757	C	LEU A 442	11.091	-4.676	29.090	1.00	12.15	C
	ATOM	2758	O	LEU A 442	11.770	-3.669	29.233	1.00	12.54	O
	ATOM	2759	CB	LEU A 442	10.287	-5.340	26.835	1.00	12.65	C
	ATOM	2760	CG	LEU A 442	10.619	-5.944	25.466	1.00	11.47	C
45	ATOM	2761	CD1	LEU A 442	9.473	-5.788	24.482	1.00	9.63	C
	ATOM	2762	CD2	LEU A 442	11.882	-5.315	24.863	1.00	13.55	C
	ATOM	2763	N	LEU A 443	10.044	-4.896	29.862	1.00	14.68	N
	ATOM	2764	CA	LEU A 443	9.700	-4.061	31.011	1.00	16.59	C
	ATOM	2765	C	LEU A 443	10.769	-4.104	32.090	1.00	17.12	C
50	ATOM	2766	O	LEU A 443	11.197	-3.063	32.607	1.00	15.83	O
	ATOM	2767	CB	LEU A 443	8.369	-4.585	31.559	1.00	19.47	C
	ATOM	2768	CG	LEU A 443	7.559	-3.671	32.463	1.00	25.52	C
	ATOM	2769	CD1	LEU A 443	7.216	-2.382	31.733	1.00	24.26	C
	ATOM	2770	CD2	LEU A 443	6.312	-4.407	32.951	1.00	21.92	C
55	ATOM	2771	N	ARG A 444	11.275	-5.295	32.414	1.00	17.80	N
	ATOM	2772	CA	ARG A 444	12.342	-5.386	33.411	1.00	20.45	C
	ATOM	2773	C	ARG A 444	13.620	-4.717	32.931	1.00	20.40	C
	ATOM	2774	O	ARG A 444	14.287	-4.023	33.701	1.00	20.97	O
	ATOM	2775	CB	ARG A 444	12.601	-6.854	33.790	1.00	25.22	C
60	ATOM	2776	CG	ARG A 444	11.356	-7.405	34.478	1.00	32.03	C
	ATOM	2777	CD	ARG A 444	11.655	-8.431	35.541	1.00	37.10	C
	ATOM	2778	NE	ARG A 444	11.534	-9.784	35.020	1.00	41.19	N
	ATOM	2779	CZ	ARG A 444	10.917	-10.767	35.666	1.00	44.17	C
	ATOM	2780	NH1	ARG A 444	10.357	-10.560	36.852	1.00	44.37	N
65	ATOM	2781	NH2	ARG A 444	10.861	-11.969	35.100	1.00	45.89	N
	ATOM	2782	N	ASN A 445	13.941	-4.846	31.641	1.00	16.93	N
	ATOM	2783	CA	ASN A 445	15.161	-4.244	31.113	1.00	16.96	C
	ATOM	2784	C	ASN A 445	14.980	-2.840	30.568	1.00	15.44	C
	ATOM	2785	O	ASN A 445	15.878	-2.345	29.884	1.00	13.79	O
70	ATOM	2786	CB	ASN A 445	15.707	-5.162	30.014	1.00	18.47	C
	ATOM	2787	CG	ASN A 445	16.137	-6.538	30.488	1.00	18.89	C
	ATOM	2788	OD1	ASN A 445	16.055	-7.537	29.770	1.00	17.39	O

	ATOM	2789	ND2	ASN A 445	16.647	-6.588	31.708	1.00	18.02	N
	ATOM	2790	N	ALA A 446	13.878	-2.159	30.845	1.00	15.51	N
	ATOM	2791	CA	ALA A 446	13.648	-0.829	30.296	1.00	15.51	C
	ATOM	2792	C	ALA A 446	14.752	0.154	30.621	1.00	17.57	C
5	ATOM	2793	O	ALA A 446	15.188	0.268	31.771	1.00	16.35	O
	ATOM	2794	CB	ALA A 446	12.303	-0.293	30.787	1.00	14.81	C
	ATOM	2795	N	ASN A 447	15.126	0.981	29.647	1.00	16.64	N
	ATOM	2796	CA	ASN A 447	16.098	2.052	29.902	1.00	16.00	C
	ATOM	2797	C	ASN A 447	15.844	3.208	28.950	1.00	17.83	C
10	ATOM	2798	O	ASN A 447	16.012	3.038	27.732	1.00	18.83	O
	ATOM	2799	CB	ASN A 447	17.522	1.518	29.728	1.00	17.65	C
	ATOM	2800	CG	ASN A 447	18.566	2.597	29.929	1.00	23.38	C
	ATOM	2801	OD1	ASN A 447	18.419	3.452	30.797	1.00	22.77	O
	ATOM	2802	ND2	ASN A 447	19.650	2.601	29.162	1.00	24.43	N
15	ATOM	2803	N	PRO A 448	15.540	4.380	29.478	1.00	18.20	N
	ATOM	2804	CA	PRO A 448	15.366	4.620	30.890	1.00	17.16	C
	ATOM	2805	C	PRO A 448	14.176	3.878	31.473	1.00	18.21	C
	ATOM	2806	O	PRO A 448	13.243	3.420	30.799	1.00	16.91	O
	ATOM	2807	CB	PRO A 448	15.154	6.119	31.013	1.00	19.04	C
20	ATOM	2808	CG	PRO A 448	14.668	6.558	29.674	1.00	20.73	C
	ATOM	2809	CD	PRO A 448	15.292	5.619	28.686	1.00	20.31	C
	ATOM	2810	N	PRO A 449	14.220	3.677	32.782	1.00	18.86	N
	ATOM	2811	CA	PRO A 449	13.201	2.918	33.477	1.00	19.10	C
	ATOM	2812	C	PRO A 449	11.848	3.614	33.430	1.00	20.78	C
25	ATOM	2813	O	PRO A 449	11.788	4.827	33.243	1.00	20.62	O
	ATOM	2814	CB	PRO A 449	13.712	2.856	34.914	1.00	20.85	C
	ATOM	2815	CG	PRO A 449	15.155	3.208	34.851	1.00	21.46	C
	ATOM	2816	CD	PRO A 449	15.289	4.170	33.697	1.00	19.58	C
	ATOM	2817	N	PHE A 450	10.782	2.854	33.601	1.00	21.46	N
30	ATOM	2818	CA	PHE A 450	9.438	3.389	33.709	1.00	28.61	C
	ATOM	2819	C	PHE A 450	9.072	3.431	35.204	1.00	33.92	C
	ATOM	2820	O	PHE A 450	8.942	4.534	35.775	1.00	36.20	O
	ATOM	2821	CB	PHE A 450	8.401	2.527	32.994	1.00	27.81	C
	ATOM	2822	CG	PHE A 450	8.420	2.651	31.498	1.00	25.37	C
35	ATOM	2823	CD1	PHE A 450	7.693	3.645	30.865	1.00	24.79	C
	ATOM	2824	CD2	PHE A 450	9.145	1.756	30.730	1.00	26.22	C
	ATOM	2825	CE1	PHE A 450	7.696	3.765	29.488	1.00	24.38	C
	ATOM	2826	CE2	PHE A 450	9.152	1.871	29.352	1.00	26.70	C
	ATOM	2827	CZ	PHE A 450	8.427	2.870	28.731	1.00	26.67	C
40	ATOM	2828	OXT	PHE A 450	9.364	2.398	35.866	1.00	39.79	O
	ATOM	2829	MG	IUM A 500	28.946	14.438	16.660	1.00	33.17	MG
	ATOM	2831	C1	MAN A 600	5.668	-11.308	42.166	1.00	49.14	C
	ATOM	2832	C2	MAN A 600	7.120	-11.237	41.573	1.00	49.77	C
	ATOM	2833	O2	MAN A 600	8.041	-11.026	42.620	1.00	50.50	O
45	ATOM	2834	C3	MAN A 600	7.409	-12.514	40.808	1.00	50.61	C
	ATOM	2835	O3	MAN A 600	8.746	-12.457	40.289	1.00	52.29	O
	ATOM	2836	C4	MAN A 600	7.214	-13.771	41.606	1.00	49.83	C
	ATOM	2837	O4	MAN A 600	7.152	-14.888	40.732	1.00	49.25	O
	ATOM	2838	C5	MAN A 600	5.938	-13.737	42.478	1.00	49.49	C
50	ATOM	2839	C6	MAN A 600	6.030	-14.691	43.660	1.00	48.90	C
	ATOM	2840	O6	MAN A 600	7.004	-14.235	44.570	1.00	49.55	O
	ATOM	2841	O5	MAN A 600	5.598	-12.455	42.966	1.00	48.82	O
	ATOM	2842	C1	MAN A 650	-1.019	0.389	36.281	1.00	33.59	C
	ATOM	2843	C2	MAN A 650	-1.735	-0.910	36.785	1.00	35.19	C
55	ATOM	2844	O2	MAN A 650	-1.810	-0.926	38.207	1.00	35.56	O
	ATOM	2845	C3	MAN A 650	-3.139	-0.988	36.208	1.00	36.76	C
	ATOM	2846	O3	MAN A 650	-3.775	-2.175	36.706	1.00	37.15	O
	ATOM	2847	C4	MAN A 650	-3.976	0.239	36.472	1.00	38.33	C
	ATOM	2848	O4	MAN A 650	-5.154	0.218	35.687	1.00	40.01	O
60	ATOM	2849	C5	MAN A 650	-3.171	1.500	36.088	1.00	38.36	C
	ATOM	2850	C6	MAN A 650	-3.775	2.831	36.470	1.00	39.68	C
	ATOM	2851	O6	MAN A 650	-3.054	3.827	35.766	1.00	42.08	O
	ATOM	2852	O5	MAN A 650	-1.856	1.461	36.634	1.00	35.94	O
	ATOM	2853	C1	NAG A 800	-8.073	-6.145	-0.318	1.00	9.79	C
65	ATOM	2854	C2	NAG A 800	-8.690	-7.157	-1.282	1.00	10.36	C
	ATOM	2855	N2	NAG A 800	-7.691	-7.663	-2.243	1.00	10.16	N
	ATOM	2856	C7	NAG A 800	-7.477	-8.997	-2.458	1.00	13.26	C
	ATOM	2857	O7	NAG A 800	-8.065	-9.803	-1.898	1.00	14.95	O
	ATOM	2858	C8	NAG A 800	-6.428	-9.300	-3.464	1.00	11.06	C
70	ATOM	2859	C3	NAG A 800	-9.811	-6.520	-2.083	1.00	11.55	C
	ATOM	2860	O3	NAG A 800	-10.512	-7.519	-2.816	1.00	11.95	O
	ATOM	2861	C4	NAG A 800	-10.844	-5.826	-1.139	1.00	11.32	C

	ATOM	2862	O4	NAG	A	800	-11.756	-5.115	-1.996	1.00	11.09		O
	ATOM	2863	C5	NAG	A	800	-10.060	-4.839	-0.256	1.00	9.16		C
	ATOM	2864	O5	NAG	A	800	-9.147	-5.613	0.503	1.00	7.61		O
	ATOM	2865	C6	NAG	A	800	-10.905	-4.025	0.707	1.00	8.71		C
5	ATOM	2866	O6	NAG	A	800	-10.129	-3.168	1.504	1.00	10.07		O
	ATOM	2867	C1	GOL	G	700	5.971	-7.474	13.148	1.00	56.20		C
	ATOM	2868	O1	GOL	G	700	6.763	-8.674	13.072	1.00	56.59		O
	ATOM	2869	C2	GOL	G	700	4.604	-7.678	12.511	1.00	56.76		C
	ATOM	2870	O2	GOL	G	700	3.707	-6.678	13.053	1.00	57.19		O
10	ATOM	2871	C3	GOL	G	700	4.726	-7.533	10.989	1.00	55.80		C
	ATOM	2872	O3	GOL	G	700	3.721	-8.314	10.310	1.00	55.24		O
	ATOM	2873	OW0	WAT	W	1	-4.468	16.654	2.524	1.00	5.60		O
	ATOM	2874	OW0	WAT	W	2	-9.324	-4.136	3.963	1.00	6.10		O
	ATOM	2875	OW0	WAT	W	3	-7.470	-3.307	-2.246	1.00	5.86		O
15	ATOM	2876	OW0	WAT	W	4	12.860	0.177	1.787	1.00	5.96		O
	ATOM	2877	OW0	WAT	W	5	-5.097	10.396	6.971	1.00	6.32		O
	ATOM	2878	OW0	WAT	W	6	8.197	-5.100	2.595	1.00	6.05		O
	ATOM	2879	OW0	WAT	W	7	-0.886	-12.491	-4.926	1.00	7.07		O
	ATOM	2880	OW0	WAT	W	8	10.318	-7.987	-10.336	1.00	7.50		O
20	ATOM	2881	OW0	WAT	W	9	14.305	-0.911	18.902	1.00	7.40		O
	ATOM	2882	OW0	WAT	W	10	6.478	5.872	17.995	1.00	7.57		O
	ATOM	2883	OW0	WAT	W	11	2.423	-9.736	0.365	1.00	7.92		O
	ATOM	2884	OW0	WAT	W	12	1.030	-0.380	18.240	1.00	8.32		O
	ATOM	2885	OW0	WAT	W	13	13.819	-1.981	3.118	1.00	8.36		O
25	ATOM	2886	OW0	WAT	W	14	10.400	1.638	1.169	1.00	8.17		O
	ATOM	2887	OW0	WAT	W	15	-5.766	-9.753	4.360	1.00	8.35		O
	ATOM	2888	OW0	WAT	W	16	5.966	-14.827	-7.223	1.00	8.55		O
	ATOM	2889	OW0	WAT	W	17	7.007	-11.847	6.999	1.00	8.79		O
	ATOM	2890	OW0	WAT	W	18	13.826	-7.905	-10.918	1.00	8.81		O
30	ATOM	2891	OW0	WAT	W	19	14.539	-0.383	9.398	1.00	9.03		O
	ATOM	2892	OW0	WAT	W	20	-0.933	2.266	23.257	1.00	9.17		O
	ATOM	2893	OW0	WAT	W	21	12.170	-3.479	17.651	1.00	9.27		O
	ATOM	2894	OW0	WAT	W	22	0.705	-12.567	-11.769	1.00	9.37		O
	ATOM	2895	OW0	WAT	W	23	11.229	-17.196	19.443	1.00	9.19		O
35	ATOM	2896	OW0	WAT	W	24	10.620	-1.566	18.573	1.00	9.42		O
	ATOM	2897	OW0	WAT	W	25	-7.475	-2.684	0.505	1.00	9.78		O
	ATOM	2898	OW0	WAT	W	26	-8.958	18.273	6.515	1.00	9.87		O
	ATOM	2899	OW0	WAT	W	27	17.557	-3.737	24.225	1.00	10.25		O
	ATOM	2900	OW0	WAT	W	28	23.059	-3.505	19.890	1.00	10.29		O
40	ATOM	2901	OW0	WAT	W	29	4.767	16.031	5.354	1.00	10.53		O
	ATOM	2902	OW0	WAT	W	30	8.485	-1.312	22.058	1.00	10.47		O
	ATOM	2903	OW0	WAT	W	31	9.567	-7.077	1.426	1.00	10.47		O
	ATOM	2904	OW0	WAT	W	32	6.081	-15.169	-3.110	1.00	10.80		O
	ATOM	2905	OW0	WAT	W	33	-6.029	-5.578	-3.194	1.00	10.73		O
45	ATOM	2906	OW0	WAT	W	34	-0.551	-8.403	-11.160	1.00	10.64		O
	ATOM	2907	OW0	WAT	W	35	21.193	-4.885	18.347	1.00	10.94		O
	ATOM	2908	OW0	WAT	W	36	16.703	-14.576	15.763	1.00	10.99		O
	ATOM	2909	OW0	WAT	W	37	27.431	6.691	19.167	1.00	11.25		O
	ATOM	2910	OW0	WAT	W	38	17.711	12.202	-5.183	1.00	11.51		O
50	ATOM	2911	OW0	WAT	W	39	-3.425	15.550	13.219	1.00	11.38		O
	ATOM	2912	OW0	WAT	W	40	1.926	-9.415	-10.379	1.00	11.20		O
	ATOM	2913	OW0	WAT	W	41	10.725	-12.796	-6.900	1.00	11.29		O
	ATOM	2914	OW0	WAT	W	42	4.586	-12.320	-0.004	1.00	11.22		O
	ATOM	2915	OW0	WAT	W	43	31.723	-3.146	16.036	1.00	11.36		O
55	ATOM	2916	OW0	WAT	W	44	-2.405	-2.392	16.337	1.00	11.79		O
	ATOM	2917	OW0	WAT	W	45	9.550	-0.217	-0.443	1.00	11.72		O
	ATOM	2918	OW0	WAT	W	46	7.087	-13.703	-0.019	1.00	12.00		O
	ATOM	2919	OW0	WAT	W	47	1.840	16.199	-0.689	1.00	12.05		O
	ATOM	2920	OW0	WAT	W	48	8.160	-7.933	20.936	1.00	11.91		O
60	ATOM	2921	OW0	WAT	W	49	-7.538	19.875	9.498	1.00	12.29		O
	ATOM	2922	OW0	WAT	W	50	9.058	-10.668	20.774	1.00	11.78		O
	ATOM	2923	OW0	WAT	W	51	16.826	3.308	23.487	1.00	12.38		O
	ATOM	2924	OW0	WAT	W	52	-0.582	-2.790	18.365	1.00	12.92		O
	ATOM	2925	OW0	WAT	W	53	1.832	19.649	3.061	1.00	12.83		O
65	ATOM	2926	OW0	WAT	W	54	12.706	-8.455	14.301	1.00	12.82		O
	ATOM	2927	OW0	WAT	W	55	-11.536	9.535	-0.312	1.00	13.19		O
	ATOM	2928	OW0	WAT	W	56	-6.032	15.160	0.690	1.00	13.88		O
	ATOM	2929	OW0	WAT	W	57	19.162	-5.707	15.994	1.00	14.13		O
	ATOM	2930	OW0	WAT	W	58	-1.239	4.561	14.826	1.00	14.56		O
70	ATOM	2931	OW0	WAT	W	59	8.708	-18.310	13.262	1.00	14.09		O
	ATOM	2932	OW0	WAT	W	60	17.937	3.773	25.959	1.00	13.94		O
	ATOM	2933	OW0	WAT	W	61	5.763	2.778	-10.531	1.00	14.20		O

	ATOM	2934	OW0	WAT	W	62	4.818	16.514	-4.288	1.00	14.46	O
	ATOM	2935	OW0	WAT	W	63	15.604	-2.866	10.842	1.00	14.30	O
	ATOM	2936	OW0	WAT	W	64	31.308	4.387	6.863	1.00	14.65	O
	ATOM	2937	OW0	WAT	W	65	10.455	15.524	-0.294	1.00	14.43	O
5	ATOM	2938	OW0	WAT	W	66	3.496	1.048	22.599	1.00	14.74	O
	ATOM	2939	OW0	WAT	W	67	-8.496	-0.107	-4.629	1.00	14.14	O
	ATOM	2940	OW0	WAT	W	68	-11.241	8.767	20.443	1.00	14.78	O
	ATOM	2941	OW0	WAT	W	69	-1.634	-4.976	12.452	1.00	14.74	O
	ATOM	2942	OW0	WAT	W	70	17.087	-13.910	18.326	1.00	14.95	O
10	ATOM	2943	OW0	WAT	W	71	-0.612	-3.043	14.265	1.00	15.69	O
	ATOM	2944	OW0	WAT	W	72	-13.481	-4.288	3.399	1.00	15.73	O
	ATOM	2945	OW0	WAT	W	73	5.936	13.080	-7.676	1.00	15.27	O
	ATOM	2946	OW0	WAT	W	74	0.494	2.739	20.969	1.00	15.30	O
	ATOM	2947	OW0	WAT	W	75	23.631	-1.239	18.248	1.00	15.65	O
15	ATOM	2948	OW0	WAT	W	76	13.244	8.375	26.887	1.00	15.66	O
	ATOM	2949	OW0	WAT	W	77	30.009	2.397	0.481	1.00	15.32	O
	ATOM	2950	OW0	WAT	W	78	14.697	-24.524	18.449	1.00	16.10	O
	ATOM	2951	OW0	WAT	W	79	9.865	-14.692	0.881	1.00	15.61	O
	ATOM	2952	OW0	WAT	W	80	-6.700	3.255	18.580	1.00	15.95	O
20	ATOM	2953	OW0	WAT	W	81	0.226	-10.358	4.396	1.00	16.43	O
	ATOM	2954	OW0	WAT	W	82	-14.277	-3.237	7.387	1.00	16.55	O
	ATOM	2955	OW0	WAT	W	83	-14.273	10.136	14.220	1.00	16.35	O
	ATOM	2956	OW0	WAT	W	84	16.995	-22.459	14.478	1.00	16.89	O
	ATOM	2957	OW0	WAT	W	85	8.800	-18.470	-1.262	1.00	16.06	O
25	ATOM	2958	OW0	WAT	W	86	-9.771	-2.396	-3.663	1.00	16.79	O
	ATOM	2959	OW0	WAT	W	87	31.994	-3.122	5.019	1.00	16.44	O
	ATOM	2960	OW0	WAT	W	88	-5.716	-11.410	-0.377	1.00	17.08	O
	ATOM	2961	OW0	WAT	W	89	-7.576	-6.091	-5.437	1.00	16.49	O
	ATOM	2962	OW0	WAT	W	90	-8.105	0.245	-7.257	1.00	16.85	O
30	ATOM	2963	OW0	WAT	W	91	1.936	-21.294	11.415	1.00	17.49	O
	ATOM	2964	OW0	WAT	W	92	26.647	15.826	1.455	1.00	17.25	O
	ATOM	2965	OW0	WAT	W	93	12.689	9.940	24.738	1.00	17.13	O
	ATOM	2966	OW0	WAT	W	94	-13.521	-5.945	7.221	1.00	17.80	O
	ATOM	2967	OW0	WAT	W	95	8.448	15.744	3.637	1.00	17.75	O
35	ATOM	2968	OW0	WAT	W	96	-8.192	15.467	13.488	1.00	17.91	O
	ATOM	2969	OW0	WAT	W	97	3.604	-6.629	15.807	1.00	17.79	O
	ATOM	2970	OW0	WAT	W	98	0.291	6.882	16.524	1.00	18.12	O
	ATOM	2971	OW0	WAT	W	99	15.287	-17.536	-3.539	1.00	17.85	O
	ATOM	2972	OW0	WAT	W	100	14.184	-10.300	3.235	1.00	18.33	O
40	ATOM	2973	OW0	WAT	W	101	-2.364	2.671	30.993	1.00	17.88	O
	ATOM	2974	OW0	WAT	W	102	3.745	-8.895	-12.356	1.00	18.47	O
	ATOM	2975	OW0	WAT	W	103	-6.245	-7.090	-7.683	1.00	18.81	O
	ATOM	2976	OW0	WAT	W	104	1.436	-14.284	25.817	1.00	18.52	O
	ATOM	2977	OW0	WAT	W	105	12.268	-4.305	9.772	1.00	18.81	O
45	ATOM	2978	OW0	WAT	W	106	-0.224	-18.011	18.615	1.00	19.25	O
	ATOM	2979	OW0	WAT	W	107	-11.552	-5.720	4.596	1.00	19.42	O
	ATOM	2980	OW0	WAT	W	108	14.435	-15.325	7.825	1.00	19.06	O
	ATOM	2981	OW0	WAT	W	109	5.457	14.376	18.532	1.00	19.25	O
	ATOM	2982	OW0	WAT	W	110	33.159	-5.641	1.172	1.00	19.33	O
50	ATOM	2983	OW0	WAT	W	111	21.488	-7.744	27.377	1.00	18.85	O
	ATOM	2984	OW0	WAT	W	112	-0.732	12.133	-4.438	1.00	20.00	O
	ATOM	2985	OW0	WAT	W	113	-0.539	4.054	17.863	1.00	19.83	O
	ATOM	2986	OW0	WAT	W	114	-7.316	5.876	-4.772	1.00	19.57	O
	ATOM	2987	OW0	WAT	W	115	10.104	-8.684	13.464	1.00	19.36	O
55	ATOM	2988	OW0	WAT	W	116	-6.373	-10.853	-7.428	1.00	19.77	O
	ATOM	2989	OW0	WAT	W	117	23.367	12.977	18.804	1.00	20.58	O
	ATOM	2990	OW0	WAT	W	118	4.173	10.724	23.922	1.00	20.44	O
	ATOM	2991	OW0	WAT	W	119	4.605	-16.994	13.371	1.00	19.72	O
	ATOM	2992	OW0	WAT	W	120	-13.086	-1.205	0.262	1.00	19.75	O
60	ATOM	2993	OW0	WAT	W	121	22.657	-7.291	-3.700	1.00	20.26	O
	ATOM	2994	OW0	WAT	W	122	29.490	7.752	11.469	1.00	20.15	O
	ATOM	2995	OW0	WAT	W	123	6.233	20.091	3.312	1.00	20.58	O
	ATOM	2996	OW0	WAT	W	124	16.002	-4.377	8.845	1.00	19.99	O
	ATOM	2997	OW0	WAT	W	125	-14.036	6.248	16.420	1.00	20.32	O
65	ATOM	2998	OW0	WAT	W	126	24.954	-10.530	23.514	1.00	20.20	O
	ATOM	2999	OW0	WAT	W	127	-5.026	-3.016	-9.151	1.00	19.86	O
	ATOM	3000	OW0	WAT	W	128	22.890	17.427	15.518	1.00	20.21	O
	ATOM	3001	OW0	WAT	W	129	7.124	-16.580	8.309	1.00	21.04	O
	ATOM	3002	OW0	WAT	W	130	-11.004	-2.388	13.243	1.00	20.24	O
70	ATOM	3003	OW0	WAT	W	131	3.527	8.031	26.930	1.00	20.59	O
	ATOM	3004	OW0	WAT	W	132	-2.513	-12.076	20.838	1.00	21.55	O
	ATOM	3005	OW0	WAT	W	133	-13.855	10.661	6.699	1.00	20.52	O

	ATOM	3006	OW0 WAT W 134	6.324	9.299	23.766	1.00	21.47			O
	ATOM	3007	OW0 WAT W 135	13.982	17.723	12.601	1.00	21.83			O
	ATOM	3008	OW0 WAT W 136	7.589	-2.515	44.700	1.00	21.84			O
	ATOM	3009	OW0 WAT W 137	18.823	-8.635	13.064	1.00	21.59			O
5	ATOM	3010	OW0 WAT W 138	7.675	-18.108	2.858	1.00	21.94			O
	ATOM	3011	OW0 WAT W 139	10.142	-13.484	-9.453	1.00	22.79			O
	ATOM	3012	OW0 WAT W 140	-8.748	-4.033	13.606	1.00	22.15			O
	ATOM	3013	OW0 WAT W 141	28.299	8.450	16.957	1.00	23.12			O
	ATOM	3014	OW0 WAT W 142	-0.123	8.590	25.377	1.00	22.65			O
10	ATOM	3015	OW0 WAT W 143	4.305	5.196	-10.573	1.00	22.59			O
	ATOM	3016	OW0 WAT W 144	3.216	18.707	-3.341	1.00	23.01			O
	ATOM	3017	OW0 WAT W 145	23.235	-8.140	10.628	1.00	22.81			O
	ATOM	3018	OW0 WAT W 146	22.644	-9.297	3.639	1.00	23.06			O
	ATOM	3019	OW0 WAT W 147	8.467	11.734	24.878	1.00	22.90			O
15	ATOM	3020	OW0 WAT W 148	26.741	14.179	16.573	1.00	23.03			O
	ATOM	3021	OW0 WAT W 149	29.370	12.527	16.019	1.00	23.20			O
	ATOM	3022	OW0 WAT W 150	-2.593	8.779	22.944	1.00	23.78			O
	ATOM	3023	OW0 WAT W 151	-13.042	11.744	0.631	1.00	23.23			O
	ATOM	3024	OW0 WAT W 152	3.415	21.470	13.104	1.00	23.05			O
20	ATOM	3025	OW0 WAT W 153	6.048	8.207	26.173	1.00	22.63			O
	ATOM	3026	OW0 WAT W 154	24.730	-11.926	11.981	1.00	23.13			O
	ATOM	3027	OW0 WAT W 155	11.681	-16.410	-7.159	1.00	23.40			O
	ATOM	3028	OW0 WAT W 156	31.087	14.581	17.102	1.00	23.88			O
	ATOM	3029	OW0 WAT W 157	-7.485	-9.642	1.513	1.00	23.54			O
25	ATOM	3030	OW0 WAT W 158	22.874	0.702	-5.440	1.00	23.80			O
	ATOM	3031	OW0 WAT W 159	-5.044	15.418	-2.039	1.00	23.87			O
	ATOM	3032	OW0 WAT W 160	33.616	3.503	14.918	1.00	24.08			O
	ATOM	3033	OW0 WAT W 161	-10.872	15.052	4.563	1.00	24.14			O
	ATOM	3034	OW0 WAT W 162	-4.606	-13.215	2.312	1.00	24.40			O
30	ATOM	3035	OW0 WAT W 163	27.070	17.927	-2.306	1.00	23.99			O
	ATOM	3036	OW0 WAT W 164	9.893	-5.746	10.263	1.00	24.76			O
	ATOM	3037	OW0 WAT W 165	17.078	3.189	-7.107	1.00	24.03			O
	ATOM	3038	OW0 WAT W 166	-15.062	14.379	19.475	1.00	24.70			O
	ATOM	3039	OW0 WAT W 167	22.032	-0.623	28.407	1.00	24.25			O
35	ATOM	3040	OW0 WAT W 168	12.181	-23.786	18.858	1.00	24.75			O
	ATOM	3041	OW0 WAT W 169	-0.705	-14.765	22.543	1.00	24.49			O
	ATOM	3042	OW0 WAT W 170	28.955	8.903	14.322	1.00	24.45			O
	ATOM	3043	OW0 WAT W 171	3.695	12.616	-6.193	1.00	24.55			O
	ATOM	3044	OW0 WAT W 172	19.538	-12.070	9.591	1.00	24.48			O
40	ATOM	3045	OW0 WAT W 173	14.310	14.805	24.317	1.00	24.67			O
	ATOM	3046	OW0 WAT W 174	29.093	11.564	-1.788	1.00	25.43			O
	ATOM	3047	OW0 WAT W 175	3.832	6.619	29.580	1.00	24.64			O
	ATOM	3048	OW0 WAT W 176	-4.607	-13.078	-5.569	1.00	25.32			O
	ATOM	3049	OW0 WAT W 177	2.173	-10.201	8.127	1.00	25.57			O
45	ATOM	3050	OW0 WAT W 178	4.802	-21.672	20.497	1.00	25.35			O
	ATOM	3051	OW0 WAT W 179	-5.652	-2.528	34.399	1.00	24.99			O
	ATOM	3052	OW0 WAT W 180	4.922	-18.387	6.576	1.00	25.41			O
	ATOM	3053	OW0 WAT W 181	19.039	18.090	8.296	1.00	24.90			O
	ATOM	3054	OW0 WAT W 182	14.030	-16.520	-0.839	1.00	25.24			O
50	ATOM	3055	OW0 WAT W 183	13.952	-13.251	29.217	1.00	24.95			O
	ATOM	3056	OW0 WAT W 184	13.863	-3.287	7.648	1.00	25.30			O
	ATOM	3057	OW0 WAT W 185	12.660	14.016	-9.979	1.00	26.21			O
	ATOM	3058	OW0 WAT W 186	12.317	9.016	29.374	1.00	25.87			O
	ATOM	3059	OW0 WAT W 187	16.730	-11.987	28.683	1.00	26.21			O
55	ATOM	3060	OW0 WAT W 188	12.915	7.477	33.524	1.00	25.68			O
	ATOM	3061	OW0 WAT W 189	20.307	19.532	0.156	1.00	26.22			O
	ATOM	3062	OW0 WAT W 190	-4.141	-5.926	13.308	1.00	26.52			O
	ATOM	3063	OW0 WAT W 191	3.650	-16.192	3.024	1.00	26.09			O
	ATOM	3064	OW0 WAT W 192	18.931	-8.114	10.486	1.00	25.84			O
60	ATOM	3065	OW0 WAT W 193	6.544	-16.595	11.718	1.00	26.72			O
	ATOM	3066	OW0 WAT W 194	-9.642	-4.382	-5.721	1.00	26.51			O
	ATOM	3067	OW0 WAT W 195	25.077	18.264	7.448	1.00	27.66			O
	ATOM	3068	OW0 WAT W 196	22.062	-10.277	28.364	1.00	26.91			O
	ATOM	3069	OW0 WAT W 197	21.527	7.834	-6.777	1.00	27.25			O
65	ATOM	3070	OW0 WAT W 198	-15.429	6.005	10.514	1.00	26.27			O
	ATOM	3071	OW0 WAT W 199	21.193	-21.187	18.252	1.00	26.89			O
	ATOM	3072	OW0 WAT W 200	19.949	-14.230	-7.811	1.00	26.83			O
	ATOM	3073	OW0 WAT W 201	27.179	3.904	26.254	1.00	27.22			O
	ATOM	3074	OW0 WAT W 202	28.930	13.425	18.572	1.00	26.37			O
70	ATOM	3075	OW0 WAT W 203	25.676	-3.621	-3.154	1.00	26.88			O
	ATOM	3076	OW0 WAT W 204	-3.469	-3.163	39.209	1.00	27.42			O
	ATOM	3077	OW0 WAT W 205	-6.999	18.655	15.387	1.00	27.04			O

	ATOM	3078	OW0 WAT W 206	-9.951	2.021	-4.039	1.00	27.29	O
	ATOM	3079	OW0 WAT W 207	16.128	17.390	14.219	1.00	27.01	O
	ATOM	3080	OW0 WAT W 208	5.742	20.405	11.966	1.00	27.24	O
	ATOM	3081	OW0 WAT W 209	3.407	-14.359	31.337	1.00	26.97	O
5	ATOM	3082	OW0 WAT W 210	13.943	16.430	15.607	1.00	26.52	O
	ATOM	3083	OW0 WAT W 211	1.033	-24.205	11.563	1.00	26.74	O
	ATOM	3084	OW0 WAT W 212	8.538	-6.820	12.252	1.00	27.10	O
	ATOM	3085	OW0 WAT W 213	26.428	-6.873	4.061	1.00	28.64	O
	ATOM	3086	OW0 WAT W 214	12.793	-21.553	8.586	1.00	27.33	O
10	ATOM	3087	OW0 WAT W 215	1.409	-1.041	41.300	1.00	27.91	O
	ATOM	3088	OW0 WAT W 216	16.429	-18.470	25.150	1.00	28.26	O
	ATOM	3089	OW0 WAT W 217	23.448	-5.569	28.728	1.00	27.68	O
	ATOM	3090	OW0 WAT W 218	3.804	12.359	21.721	1.00	27.98	O
	ATOM	3091	OW0 WAT W 219	12.182	-21.534	27.485	1.00	28.34	O
15	ATOM	3092	OW0 WAT W 220	-2.839	14.075	-5.590	1.00	29.01	O
	ATOM	3093	OW0 WAT W 221	6.291	-7.332	-11.913	1.00	27.59	O
	ATOM	3094	OW0 WAT W 222	27.232	-10.868	14.704	1.00	27.74	O
	ATOM	3095	OW0 WAT W 223	22.832	-12.419	1.056	1.00	28.27	O
	ATOM	3096	OW0 WAT W 224	24.905	16.204	16.657	1.00	27.46	O
20	ATOM	3097	OW0 WAT W 225	6.998	-16.116	1.072	1.00	28.54	O
	ATOM	3098	OW0 WAT W 226	8.341	-14.756	11.628	1.00	28.02	O
	ATOM	3099	OW0 WAT W 227	31.699	8.814	7.083	1.00	28.53	O
	ATOM	3100	OW0 WAT W 228	1.326	12.873	24.228	1.00	28.34	O
	ATOM	3101	OW0 WAT W 229	26.343	10.267	21.240	1.00	28.97	O
25	ATOM	3102	OW0 WAT W 230	-8.226	8.444	-4.190	1.00	28.02	O
	ATOM	3103	OW0 WAT W 231	1.037	10.354	23.234	1.00	27.68	O
	ATOM	3104	OW0 WAT W 232	31.351	9.070	15.681	1.00	28.94	O
	ATOM	3105	OW0 WAT W 233	9.961	-13.191	30.741	1.00	28.63	O
	ATOM	3106	OW0 WAT W 234	-1.017	-12.518	14.553	1.00	29.46	O
30	ATOM	3107	OW0 WAT W 235	7.281	16.086	5.949	1.00	28.91	O
	ATOM	3108	OW0 WAT W 236	12.010	-1.097	-12.003	1.00	29.09	O
	ATOM	3109	OW0 WAT W 237	-14.446	0.903	-0.623	1.00	28.57	O
	ATOM	3110	OW0 WAT W 238	20.658	-12.467	27.357	1.00	28.27	O
	ATOM	3111	OW0 WAT W 239	29.938	9.464	5.006	1.00	28.75	O
35	ATOM	3112	OW0 WAT W 240	14.494	-1.249	33.932	1.00	28.76	O
	ATOM	3113	OW0 WAT W 241	-6.225	20.349	11.888	1.00	28.93	O
	ATOM	3114	OW0 WAT W 242	-4.947	-14.577	-8.496	1.00	30.30	O
	ATOM	3115	OW0 WAT W 243	20.235	17.364	-1.556	1.00	30.70	O
	ATOM	3116	OW0 WAT W 244	-1.673	-9.217	19.036	1.00	30.74	O
40	ATOM	3117	OW0 WAT W 245	10.607	17.610	3.903	1.00	29.81	O
	ATOM	3118	OW0 WAT W 246	18.328	-2.427	30.996	1.00	29.71	O
	ATOM	3119	OW0 WAT W 247	15.186	10.698	24.086	1.00	30.00	O
	ATOM	3120	OW0 WAT W 248	25.589	-12.660	25.077	1.00	29.38	O
	ATOM	3121	OW0 WAT W 249	5.811	-10.320	38.194	1.00	29.86	O
45	ATOM	3122	OW0 WAT W 250	-9.482	14.737	23.332	1.00	29.60	O
	ATOM	3123	OW0 WAT W 251	-9.452	-8.084	-5.246	1.00	29.57	O
	ATOM	3124	OW0 WAT W 252	27.981	-2.018	24.047	1.00	29.85	O
	ATOM	3125	OW0 WAT W 253	9.480	-14.704	9.232	1.00	29.91	O
	ATOM	3126	OW0 WAT W 254	29.170	15.410	15.105	1.00	30.52	O
50	ATOM	3127	OW0 WAT W 255	-1.073	20.472	15.287	1.00	30.04	O
	ATOM	3128	OW0 WAT W 256	25.041	16.369	4.043	1.00	30.10	O
	ATOM	3129	OW0 WAT W 257	8.526	-10.719	12.264	1.00	30.73	O
	ATOM	3130	OW0 WAT W 258	-11.777	-9.547	-1.114	1.00	30.39	O
	ATOM	3131	OW0 WAT W 259	15.217	-24.589	13.732	1.00	31.76	O
55	ATOM	3132	OW0 WAT W 260	-10.571	15.562	-1.155	1.00	31.49	O
	ATOM	3133	OW0 WAT W 261	24.233	-10.206	-3.316	1.00	30.98	O
	ATOM	3134	OW0 WAT W 262	22.801	-14.479	24.909	1.00	32.54	O
	ATOM	3135	OW0 WAT W 263	0.353	-5.061	15.605	1.00	32.91	O
	ATOM	3136	OW0 WAT W 264	0.183	-9.444	12.256	1.00	32.18	O
60	ATOM	3137	OW0 WAT W 265	-9.240	4.480	-6.104	1.00	32.08	O
	ATOM	3138	OW0 WAT W 266	22.177	-16.298	0.412	1.00	31.68	O
	ATOM	3139	OW0 WAT W 267	20.544	-0.803	30.714	1.00	31.12	O
	ATOM	3140	OW0 WAT W 268	-13.097	-2.924	16.924	1.00	32.23	O
	ATOM	3141	OW0 WAT W 269	-2.339	21.164	17.490	1.00	33.07	O
65	ATOM	3142	OW0 WAT W 270	14.787	-12.634	7.535	1.00	31.57	O
	ATOM	3143	OW0 WAT W 271	19.163	-23.079	12.690	1.00	32.33	O
	ATOM	3144	OW0 WAT W 272	26.398	16.860	-4.892	1.00	31.30	O
	ATOM	3145	OW0 WAT W 273	-1.037	-13.317	26.276	1.00	32.40	O
	ATOM	3146	OW0 WAT W 274	31.761	-9.534	9.316	1.00	31.45	O
70	ATOM	3147	OW0 WAT W 275	-14.962	6.438	8.019	1.00	32.22	O
	ATOM	3148	OW0 WAT W 276	16.902	-22.232	24.082	1.00	32.50	O
	ATOM	3149	OW0 WAT W 277	31.999	3.938	-0.687	1.00	32.98	O

	ATOM	3150	OWO	WAT	W	278	10.882	-24.863	20.835	1.00 33.00	O
	ATOM	3151	OWO	WAT	W	279	16.312	8.681	27.021	1.00 32.18	O
	ATOM	3152	OWO	WAT	W	280	20.408	2.341	23.733	1.00 31.64	O
	ATOM	3153	OWO	WAT	W	281	3.089	-16.183	24.860	1.00 32.92	O
5	ATOM	3154	OWO	WAT	W	282	12.145	-8.651	-12.952	1.00 33.48	O
	ATOM	3155	OWO	WAT	W	283	30.869	-10.078	15.970	1.00 32.04	O
	ATOM	3156	OWO	WAT	W	284	26.112	0.524	27.149	1.00 33.28	O
	ATOM	3157	OWO	WAT	W	285	32.955	3.269	26.482	1.00 31.92	O
	ATOM	3158	OWO	WAT	W	286	-4.349	15.468	25.028	1.00 33.76	O
10	ATOM	3159	OWO	WAT	W	287	0.543	-19.994	6.822	1.00 33.30	O
	ATOM	3160	OWO	WAT	W	288	7.232	18.822	6.235	1.00 33.25	O
	ATOM	3161	OWO	WAT	W	289	30.793	-0.744	-2.106	1.00 32.41	O
	ATOM	3162	OWO	WAT	W	290	-14.044	4.412	4.984	1.00 34.64	O
	ATOM	3163	OWO	WAT	W	291	7.935	-21.433	7.051	1.00 33.93	O
15	ATOM	3164	OWO	WAT	W	292	9.487	17.785	1.224	1.00 33.09	O
	ATOM	3165	OWO	WAT	W	293	-11.530	17.332	12.202	1.00 32.80	O
	ATOM	3166	OWO	WAT	W	294	11.972	20.874	7.981	1.00 33.70	·O
	ATOM	3167	OWO	WAT	W	295	2.330	1.272	42.628	1.00 32.68	O
	ATOM	3168	OWO	WAT	W	296	-17.157	10.127	9.956	1.00 32.92	O
20	ATOM	3169	OWO	WAT	W	297	20.408	-14.578	9.046	1.00 34.48	O
	ATOM	3170	OWO	WAT	W	298	-5.731	-5.219	34.259	1.00 34.02	O
	ATOM	3171	OWO	WAT	W	299	28.823	-8.458	13.197	1.00 34.10	O
	ATOM	3172	OWO	WAT	W	300	18.168	10.098	25.967	1.00 34.11	O
	ATOM	3173	OWO	WAT	W	301	2.189	-27.221	14.252	1.00 33.96	O
25	ATOM	3174	OWO	WAT	W	302	4.440	18.298	20.498	1.00 33.98	O
	ATOM	3175	OWO	WAT	W	303	18.342	-18.763	-1.284	1.00 33.67	O
	ATOM	3176	OWO	WAT	W	304	-4.335	-4.252	15.976	1.00 33.57	O
	ATOM	3177	OWO	WAT	W	305	-5.704	-11.489	9.366	1.00 34.26	O
	ATOM	3178	OWO	WAT	W	306	8.129	-11.682	-12.784	1.00 33.48	O
30	ATOM	3179	OWO	WAT	W	307	20.227	10.579	-7.226	1.00 34.37	O
	ATOM	3180	OWO	WAT	W	308	5.761	-19.412	28.762	1.00 36.02	O
	ATOM	3181	OWO	WAT	W	309	-13.370	2.801	17.564	1.00 34.60	O
	ATOM	3182	OWO	WAT	W	310	17.448	-16.784	1.721	1.00 33.97	O
	ATOM	3183	OWO	WAT	W	311	30.754	11.892	4.112	1.00 33.96	O
35	ATOM	3184	OWO	WAT	W	312	9.298	7.216	31.177	1.00 33.72	O
	ATOM	3185	OWO	WAT	W	313	3.963	5.346	37.294	1.00 35.91	O
	ATOM	3186	OWO	WAT	W	314	-0.537	-3.858	-13.509	1.00 35.50	O
	ATOM	3187	OWO	WAT	W	315	29.546	12.636	1.125	1.00 35.28	O
	ATOM	3188	OWO	WAT	W	316	16.641	-10.279	30.641	1.00 36.00	O
40	ATOM	3189	OWO	WAT	W	317	3.375	1.212	-11.626	1.00 35.75	O
	ATOM	3190	OWO	WAT	W	318	4.176	-22.783	27.673	1.00 34.95	O
	ATOM	3191	OWO	WAT	W	319	-7.882	0.661	24.793	1.00 35.32	O
	ATOM	3192	OWO	WAT	W	320	-4.779	7.582	23.450	1.00 34.46	O
	ATOM	3193	OWO	WAT	W	321	4.365	-18.587	24.470	1.00 34.61	O
45	ATOM	3194	OWO	WAT	W	322	1.204	12.181	-7.096	1.00 36.26	O
	ATOM	3195	OWO	WAT	W	323	-3.540	-2.303	-11.595	1.00 35.37	O
	ATOM	3196	OWO	WAT	W	324	-8.444	-11.343	25.966	1.00 34.16	O
	ATOM	3197	OWO	WAT	W	325	-9.197	-3.147	27.671	1.00 34.91	O
	ATOM	3198	OWO	WAT	W	326	-5.861	6.821	-7.982	1.00 35.73	O
50	ATOM	3199	OWO	WAT	W	327	10.062	-1.946	-13.617	1.00 36.61	O
	ATOM	3200	OWO	WAT	W	328	-10.656	-3.956	29.828	1.00 35.98	O
	ATOM	3201	OWO	WAT	W	329	27.520	13.568	9.092	1.00 34.52	O
	ATOM	3202	OWO	WAT	W	330	-13.835	20.571	21.432	1.00 35.55	O
	ATOM	3203	OWO	WAT	W	331	8.763	17.704	-6.219	1.00 35.66	O
55	ATOM	3204	OWO	WAT	W	332	8.791	19.547	-1.536	1.00 35.85	O
	ATOM	3205	OWO	WAT	W	333	1.972	-24.287	16.659	1.00 36.07	O
	ATOM	3206	OWO	WAT	W	334	1.764	6.531	-9.997	1.00 35.95	O
	ATOM	3207	OWO	WAT	W	335	26.115	-21.431	23.463	1.00 35.92	O
	ATOM	3208	OWO	WAT	W	336	3.092	-20.316	22.836	1.00 36.59	O
60	ATOM	3209	OWO	WAT	W	337	9.317	-26.480	18.754	1.00 35.55	O
	ATOM	3210	OWO	WAT	W	338	21.231	19.662	18.051	1.00 37.21	O
	ATOM	3211	OWO	WAT	W	339	6.594	19.484	19.344	1.00 37.53	O
	ATOM	3212	OWO	WAT	W	340	7.477	14.635	20.823	1.00 37.91	O
	ATOM	3213	OWO	WAT	W	341	-11.937	10.574	22.349	1.00 36.41	O
65	ATOM	3214	OWO	WAT	W	342	7.548	-25.143	8.852	1.00 37.20	O
	ATOM	3215	OWO	WAT	W	343	-15.112	10.366	11.747	1.00 37.44	O
	ATOM	3216	OWO	WAT	W	344	1.187	10.146	-10.133	1.00 37.90	O
	ATOM	3217	OWO	WAT	W	345	27.638	-9.538	23.200	1.00 37.98	O
	ATOM	3218	OWO	WAT	W	346	11.116	-26.606	10.512	1.00 38.07	O
70	ATOM	3219	OWO	WAT	W	347	30.049	12.630	12.175	1.00 36.48	O
	ATOM	3220	OWO	WAT	W	348	2.579	-21.238	16.750	1.00 37.11	O
	ATOM	3221	OWO	WAT	W	349	11.496	16.342	-9.873	1.00 39.00	O

	ATOM	3222	OW0 WAT W 350	-1.466	-16.623	20.756	1.00	36.99	O
	ATOM	3223	OW0 WAT W 351	-0.545	-19.843	10.447	1.00	38.11	O
	ATOM	3224	OW0 WAT W 352	21.379	12.373	20.657	1.00	37.85	O
	ATOM	3225	OW0 WAT W 353	28.638	1.283	26.152	1.00	38.39	O
5	ATOM	3226	OW0 WAT W 354	26.602	-18.054	17.223	1.00	37.87	O
	ATOM	3227	OW0 WAT W 355	7.428	6.106	33.816	1.00	38.44	O
	ATOM	3228	OW0 WAT W 356	8.893	23.527	6.272	1.00	38.41	O
	ATOM	3229	OW0 WAT W 357	-10.471	9.875	-2.931	1.00	36.99	O
	ATOM	3230	OW0 WAT W 358	-0.662	-13.392	29.705	1.00	38.39	O
10	ATOM	3231	OW0 WAT W 359	-2.749	-13.844	23.936	1.00	36.78	O
	ATOM	3232	OW0 WAT W 360	-6.451	-7.989	-11.128	1.00	38.41	O
	ATOM	3233	OW0 WAT W 361	9.700	20.358	0.772	1.00	39.26	O
	ATOM	3234	OW0 WAT W 362	-7.793	-2.309	-8.870	1.00	38.33	O
	ATOM	3235	OW0 WAT W 363	6.887	20.392	-3.210	1.00	38.80	O
15	ATOM	3236	OW0 WAT W 364	-17.753	6.950	20.616	1.00	40.01	O
	ATOM	3237	OW0 WAT W 365	28.379	16.628	17.436	1.00	37.42	O
	ATOM	3238	OW0 WAT W 366	9.825	-12.183	6.908	1.00	38.16	O
	ATOM	3239	OW0 WAT W 367	5.690	6.886	-12.186	1.00	40.11	O
	ATOM	3240	OW0 WAT W 368	-2.055	-16.092	31.328	1.00	39.36	O
20	ATOM	3241	OW0 WAT W 369	-11.775	-1.154	-2.246	1.00	37.59	O
	ATOM	3242	OW0 WAT W 370	-3.450	4.262	-10.734	1.00	38.16	O
	ATOM	3243	OW0 WAT W 371	-14.001	-3.955	-0.918	1.00	38.31	O
	ATOM	3244	OW0 WAT W 372	8.159	3.321	-11.997	1.00	37.67	O
	ATOM	3245	OW0 WAT W 373	16.327	17.648	5.170	1.00	39.07	O
25	ATOM	3246	OW0 WAT W 374	13.238	-12.480	-13.011	1.00	38.95	O
	ATOM	3247	OW0 WAT W 375	19.726	2.965	-8.515	1.00	38.29	O
	ATOM	3248	OW0 WAT W 376	19.310	-9.518	5.350	1.00	38.81	O
	ATOM	3249	OW0 WAT W 377	-15.073	10.383	1.720	1.00	41.26	O
	ATOM	3250	OW0 WAT W 378	1.833	3.909	36.312	1.00	40.71	O
30	ATOM	3251	OW0 WAT W 379	7.669	-2.701	-13.009	1.00	38.35	O
	ATOM	3252	OW0 WAT W 380	-0.042	22.891	13.930	1.00	38.98	O
	ATOM	3253	OW0 WAT W 381	18.209	-4.980	33.399	1.00	39.29	O
	ATOM	3254	OW0 WAT W 382	13.374	15.788	3.831	1.00	39.95	O
	ATOM	3255	OW0 WAT W 383	-10.327	-7.958	3.125	1.00	38.85	O
35	ATOM	3256	OW0 WAT W 384	-3.650	3.813	32.973	1.00	39.43	O
	ATOM	3257	OW0 WAT W 385	20.875	4.704	22.603	1.00	38.60	O
	ATOM	3258	OW0 WAT W 386	14.314	17.681	-1.839	1.00	41.17	O
	ATOM	3259	OW0 WAT W 387	19.223	15.552	-7.262	1.00	41.68	O
	ATOM	3260	OW0 WAT W 388	33.270	4.365	19.865	1.00	40.05	O
40	ATOM	3261	OW0 WAT W 389	9.325	20.619	21.151	1.00	39.90	O
	ATOM	3262	OW0 WAT W 390	-13.091	15.620	6.000	1.00	40.38	O
	ATOM	3263	OW0 WAT W 391	23.491	19.179	-2.503	1.00	39.94	O
	ATOM	3264	OW0 WAT W 392	-12.773	6.682	5.403	1.00	39.84	O
	ATOM	3265	OW0 WAT W 393	28.152	1.672	-5.763	1.00	40.15	O
45	ATOM	3266	OW0 WAT W 394	0.217	0.249	39.323	1.00	39.21	O
	ATOM	3267	OW0 WAT W 395	-8.727	22.236	15.741	1.00	42.52	O
	ATOM	3268	OW0 WAT W 396	16.483	18.099	-4.316	1.00	41.15	O
	ATOM	3269	OW0 WAT W 397	6.198	3.825	37.356	1.00	40.82	O
	ATOM	3270	OW0 WAT W 398	7.009	-19.419	5.120	1.00	39.84	O
50	ATOM	3271	OW0 WAT W 399	10.448	18.227	-3.279	1.00	41.40	O
	ATOM	3272	OW0 WAT W 400	12.628	19.457	14.821	1.00	39.84	O
	ATOM	3273	OW0 WAT W 401	37.879	-8.908	11.587	1.00	40.44	O
	ATOM	3274	OW0 WAT W 402	-1.899	8.875	27.727	1.00	41.39	O
	ATOM	3275	OW0 WAT W 403	24.296	3.299	-8.463	1.00	40.53	O
55	ATOM	3276	OW0 WAT W 404	6.867	1.412	38.573	1.00	41.40	O
	ATOM	3277	OW0 WAT W 405	22.366	-14.528	11.597	1.00	43.11	O
	ATOM	3278	OW0 WAT W 406	23.833	-18.708	17.699	1.00	41.98	O
	ATOM	3279	OW0 WAT W 407	1.838	-15.790	33.526	1.00	41.48	O
	ATOM	3280	OW0 WAT W 408	27.474	-3.804	-1.240	1.00	40.65	O
60	ATOM	3281	OW0 WAT W 409	-5.174	19.174	25.726	1.00	41.76	O
	ATOM	3282	OW0 WAT W 410	0.062	25.053	24.310	1.00	41.70	O
	ATOM	3283	OW0 WAT W 411	4.471	-12.096	-12.960	1.00	43.28	O
	ATOM	3284	OW0 WAT W 412	20.256	-13.113	2.826	1.00	41.10	O
	ATOM	3285	OW0 WAT W 413	-5.840	-5.661	21.921	1.00	41.92	O
65	ATOM	3286	OW0 WAT W 414	8.684	-13.645	34.794	1.00	42.54	O
	ATOM	3287	OW0 WAT W 415	13.914	-6.916	-13.882	1.00	41.71	O
	ATOM	3288	OW0 WAT W 416	14.187	-11.282	31.629	1.00	41.23	O
	ATOM	3289	OW0 WAT W 417	12.561	17.391	1.764	1.00	43.57	O
	ATOM	3290	OW0 WAT W 418	3.232	17.233	22.744	1.00	42.83	O
70	ATOM	3291	OW0 WAT W 419	27.314	7.198	23.397	1.00	41.34	O
	ATOM	3292	OW0 WAT W 420	-12.751	1.882	-3.237	1.00	40.27	O
	ATOM	3293	OW0 WAT W 421	0.590	-24.813	14.244	1.00	41.89	O

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      ATOM   3294  OWO  WAT  W  422    -4.431   25.628   20.657  1.00  42.92           O
      ATOM   3295  OWO  WAT  W  423    10.735  -29.632   13.177  1.00  41.34           O
      ATOM   3296  OWO  WAT  W  424     7.818  -18.271   26.821  1.00  41.70           O
      ATOM   3297  OWO  WAT  W  425     2.544   -5.854  -14.071  1.00  42.37           O
  5   ATOM   3298  OWO  WAT  W  426   -10.926    0.955   20.550  1.00  43.69           O
      ATOM   3299  OWO  WAT  W  427    -1.971   15.314   -3.312  1.00  43.61           O
      ATOM   3300  OWO  WAT  W  428     1.504   15.490   -5.176  1.00  42.78           O
      ATOM   3301  OWO  WAT  W  429    24.825   -9.368   26.783  1.00  42.64           O
      ATOM   3302  OWO  WAT  W  430    14.033  -20.188    1.211  1.00  43.44           O
 10   ATOM   3303  OWO  WAT  W  431    23.267  -17.669   12.770  1.00  44.56           O
      ATOM   3304  OWO  WAT  W  432    17.150  -15.960    5.707  1.00  44.54           O
      ATOM   3305  OWO  WAT  W  433    -2.139    5.153   37.892  1.00  44.88           O
      ATOM   3306  OWO  WAT  W  434    21.785   -9.480    6.297  1.00  44.18           O
      ATOM   3307  OWO  WAT  W  435    25.968   -8.622   10.348  1.00  42.33           O
 15   ATOM   3308  OWO  WAT  W  436    -3.314  -13.078    5.090  1.00  43.68           O
      ATOM   3309  OWO  WAT  W  437   -10.754    6.347   21.686  1.00  43.50           O
      ATOM   3310  OWO  WAT  W  438     0.943   22.569   17.840  1.00  44.44           O
      ATOM   3311  OWO  WAT  W  439    24.968    8.402   -7.324  1.00  43.13           O
      ATOM   3312  OWO  WAT  W  440    16.500   -6.946    9.700  1.00  44.41           O
 20   ATOM   3313  OWO  WAT  W  441     0.557  -17.044   23.824  1.00  44.16           O
      ATOM   3314  OWO  WAT  W  442     1.825  -16.199   29.076  1.00  45.60           O
      ATOM   3315  OWO  WAT  W  443    32.689   -8.004    5.401  1.00  44.79           O
      ATOM   3316  OWO  WAT  W  444    22.281  -16.173   27.002  1.00  45.83           O
      ATOM   3317  OWO  WAT  W  445    23.674    1.373   27.678  1.00  45.60           O
 25   ATOM   3318  OWO  WAT  W  446    13.387  -27.439   12.003  1.00  45.57           O
      ATOM   3319  OWO  WAT  W  447    23.380   -3.087   30.367  1.00  44.29           O
      ATOM   3320  OWO  WAT  W  448    25.870   -2.427   29.466  1.00  45.76           O
      ATOM   3321  OWO  WAT  W  449    28.230  -12.183   20.780  1.00  46.33           O
      ATOM   3322  OWO  WAT  W  450     0.525  -12.459    8.685  1.00  46.37           O
 30   ATOM   3323  OWO  WAT  W  451     0.049    3.073   38.476  1.00  44.20           O
      ATOM   3324  OWO  WAT  W  452    15.358  -25.408   11.134  1.00  45.34           O
      ATOM   3325  OWO  WAT  W  453    -7.126   10.457   -5.602  1.00  46.42           O
      ATOM   3326  OWO  WAT  W  454   -15.541   12.545   14.559  1.00  44.77           O
      ATOM   3327  OWO  WAT  W  455     9.733   -8.250    9.274  1.00  46.50           O
 35   ATOM   3328  OWO  WAT  W  456    15.819  -14.661  -10.184  1.00  48.29           O
      ATOM   3329  OWO  WAT  W  457    24.696   -7.742    6.017  1.00  45.66           O
      ATOM   3330  OWO  WAT  W  458   -10.468   19.247   26.127  1.00  47.46           O
      ATOM   3331  OWO  WAT  W  459    12.789   -8.545   10.918  1.00  45.92           O
      ATOM   3332  OWO  WAT  W  460   -13.715    6.091    1.705  1.00  48.27           O
 40   ATOM   3333  OWO  WAT  W  461    29.183  -12.218   16.919  1.00  48.14           O
      ATOM   3334  OWO  WAT  W  462    -5.173    6.902   28.600  1.00  47.42           O
      ATOM   3335  OWO  WAT  W  463     5.020   22.830   14.837  1.00  48.29           O
      ATOM   3336  OWO  WAT  W  464     1.629  -27.213   10.934  1.00  45.82           O
      ATOM   3337  OWO  WAT  W  465    10.448  -11.702  -11.581  1.00  47.52           O
 45   ATOM   3338  OWO  WAT  W  466    25.475    0.155   -6.203  1.00  46.75           O
      ATOM   3339  OWO  WAT  W  467    11.999   19.475   -5.519  1.00  46.73           O
      ATOM   3340  OWO  WAT  W  468    29.707   -3.847   25.273  1.00  50.07           O
      ATOM   3341  OWO  WAT  W  469    20.987   -8.262    8.572  1.00  46.30           O
      ATOM   3342  OWO  WAT  W  470    25.831   15.569   12.286  1.00  49.36           O
 50   ATOM   3343  OWO  WAT  W  471    -9.628   18.946   14.121  1.00  49.44           O
      ATOM   3344  OWO  WAT  W  472   -14.232   19.028   24.748  1.00  49.03           O
      ATOM   3345  OWO  WAT  W  473    26.936  -13.463   12.361  1.00  48.35           O
      ATOM   3346  OWO  WAT  W  474    -9.922   -6.399   24.487  1.00  48.05           O
      ATOM   3347  OWO  WAT  W  475    20.086    9.651   23.257  1.00  47.80           O
 55   ATOM   3348  OWO  WAT  W  476     8.200   10.319  -11.614  1.00  48.09           O
      ATOM   3349  OWO  WAT  W  477     6.799    7.061   29.352  1.00  48.85           O
      ATOM   3350  OWO  WAT  W  478    10.735   -0.632   34.142  1.00  48.01           O
      ATOM   3351  OWO  WAT  W  479    -6.739   13.322   24.757  1.00  47.80           O
      ATOM   3352  OWO  WAT  W  480    33.317   -5.038   21.142  1.00  48.61           O
 60   ATOM   3353  OWO  WAT  W  481    16.742   18.491   19.979  1.00  48.67           O
      ATOM   3354  OWO  WAT  W  482    -3.257   -8.684   14.796  1.00  48.30           O
      ATOM   3355  OWO  WAT  W  483    -5.635  -12.310    6.861  1.00  47.68           O
      ATOM   3356  OWO  WAT  W  484    -6.546   -7.324   23.953  1.00  48.00           O
      ATOM   3357  OWO  WAT  W  485   -16.417   11.786   18.852  1.00  49.45           O
 65   ATOM   3358  OWO  WAT  W  486     8.671  -23.459   21.434  1.00  48.92           O
      ATOM   3359  OWO  WAT  W  487    -5.235  -11.988   16.287  1.00  51.42           O
      ATOM   3360  OWO  WAT  W  488    19.211    5.233   32.606  1.00  48.01           O
      ATOM   3361  OWO  WAT  W  489     3.094   22.345   20.038  1.00  47.93           O
      ATOM   3362  OWO  WAT  W  490    15.806  -10.355    6.028  1.00  48.03           O
 70   ATOM   3363  OWO  WAT  W  491    -6.950   -2.187   14.967  1.00  48.57           O
      ATOM   3364  OWO  WAT  W  492    12.467   21.040   -0.832  1.00  50.56           O
      ATOM   3365  OWO  WAT  W  493     0.205   16.980   -3.263  1.00  49.08           O
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	ATOM	3366	OW0 WAT	W 494	-0.236	-13.180	11.296	1.00	49.99	O
	ATOM	3367	OW0 WAT	W 495	6.150	-23.964	20.680	1.00	48.18	O
	ATOM	3368	OW0 WAT	W 496	-13.719	7.872	-0.329	1.00	48.87	O
	ATOM	3369	OW0 WAT	W 497	-12.209	15.214	0.936	1.00	50.57	O
5	ATOM	3370	OW0 WAT	W 498	-2.924	-9.799	-15.659	1.00	51.19	O
	ATOM	3371	OW0 WAT	W 499	6.248	-11.289	9.950	1.00	49.69	O
	ATOM	3372	OW0 WAT	W 500	17.344	-18.775	4.262	1.00	50.03	O
	ATOM	3373	OW0 WAT	W 501	16.733	-8.345	33.918	1.00	50.77	O
	ATOM	3374	OW0 WAT	W 502	18.913	19.056	-3.412	1.00	52.40	O
10	ATOM	3375	OW0 WAT	W 503	19.260	-16.015	-9.840	1.00	52.05	O
	ATOM	3376	OW0 WAT	W 504	27.834	12.908	-5.570	1.00	53.02	O
	ATOM	3377	OW0 WAT	W 505	24.475	-19.432	26.879	1.00	49.42	O
	ATOM	3378	OW0 WAT	W 506	8.968	-29.748	10.541	1.00	51.81	O
	ATOM	3379	OW0 WAT	W 507	-11.867	-10.300	-5.857	1.00	49.98	O
15	ATOM	3380	OW0 WAT	W 508	-0.894	-7.386	15.813	1.00	53.61	O
	ATOM	3381	OW0 WAT	W 509	-6.619	1.184	16.728	1.00	51.96	O
	ATOM	3382	OW0 WAT	W 510	-7.892	-6.118	11.419	1.00	51.35	O
	ATOM	3383	OW0 WAT	W 511	35.158	3.849	21.698	1.00	49.52	O
	ATOM	3384	OW0 WAT	W 512	30.968	1.931	-2.551	1.00	53.02	O
20	ATOM	3385	OW0 WAT	W 513	14.962	20.345	-5.321	1.00	51.10	O
	ATOM	3386	OW0 WAT	W 514	10.299	20.332	3.887	1.00	51.28	O
	ATOM	3387	OW0 WAT	W 515	9.136	-4.930	-14.241	1.00	55.74	O
	ATOM	3388	OW0 WAT	W 516	16.017	18.130	16.960	1.00	52.99	O
	ATOM	3389	OW0 WAT	W 517	-10.226	-2.977	-7.939	1.00	52.52	O
25	ATOM	3390	OW0 WAT	W 518	-7.913	-1.057	33.785	1.00	55.56	O
	ATOM	3391	OW0 WAT	W 519	-4.603	9.544	27.704	1.00	53.84	O
	ATOM	3392	OW0 WAT	W 520	36.037	-9.066	14.613	1.00	54.07	O
	ATOM	3393	OW0 WAT	W 521	-2.613	-5.713	-15.830	1.00	56.11	O
	ATOM	3394	OW0 WAT	W 522	22.102	17.648	-5.091	1.00	55.53	O
30	ATOM	3395	OW0 WAT	W 523	-4.113	-12.228	31.460	1.00	57.69	O
	ATOM	3396	OW0 WAT	W 524	-12.219	-5.923	-5.197	1.00	56.14	O
	ATOM	3397	OW0 WAT	W 525	8.378	-6.929	44.771	1.00	55.77	O
	ATOM	3398	OW0 WAT	W 526	21.973	-11.541	8.343	1.00	58.28	O
	ATOM	3399	OW0 WAT	W 527	7.445	-9.109	-13.773	1.00	59.63	O
35	ATOM	3400	OW0 WAT	W 528	6.357	-28.394	18.254	1.00	58.45	O
	ATOM	3401	OW0 WAT	W 529	24.736	-10.387	1.413	1.00	59.79	O
	ATOM	3402	OW0 WAT	W 530	17.122	-2.581	-8.119	1.00	59.43	O
	ATOM	3403	OW0 WAT	W 531	18.599	-24.379	17.004	1.00	60.10	O
	ATOM	3404	OW0 WAT	W 532	20.743	6.549	24.623	1.00	62.58	O
40	ATOM	3405	OW0 WAT	W 533	30.196	-6.698	5.283	1.00	61.40	O
	ATOM	3406	OW0 WAT	W 534	30.992	9.365	-2.158	1.00	62.44	O

SEQUENCE LISTING

(1) GENERAL INFORMATION:

    (i) APPLICANT:

5   (A) NAME: NOVO NORDISK A/S

          (B) STREET: Novo Alle

          (C) CITY: Bagsvaerd

          (E) COUNTRY: Denmark

          (F) POSTAL CODE (ZIP): DK-2880

10   (G) TELEPHONE: +45 44 44 88 88

          (H) TELEFAX: +45 44 49 32 56

    (ii) TITLE OF INVENTION: FAMILY 6 ENDO-1,4-BETA-GLUCANASE
VARIANTS AND CLEANING COMPOSITIONS CONTAINING THEM

15

    (iii) NUMBER OF SEQUENCES: 4

    (iv) COMPUTER READABLE FORM:

          (A) MEDIUM TYPE: Floppy disk

20   (B) COMPUTER: IBM PC compatible

          (C) OPERATING SYSTEM: PC-DOS/MS-DOS

          (D) SOFTWARE: PatentIn Release #1.0, Version #1.30

(EPO)

25 (2) INFORMATION FOR SEQ ID NO: 1:

    (i) SEQUENCE CHARACTERISTICS:

          (A) LENGTH: 1422 base pairs

          (B) TYPE: nucleic acid

          (C) STRANDEDNESS: single

30   (D) TOPOLOGY: linear

    (ii) MOLECULE TYPE: DNA (genomic)

    (vi) ORIGINAL SOURCE:

          (A) ORGANISM: Humicola insolens DSM 1800

35   (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

ATGGCCAAGT TTTTCCTTAC TGCTGCCTTT GCGGCTGCCG CTCTCGCCGC TCCCGTTGTT   60

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     GAGGAGCGCC AGAACTGTGC CTCGACTTGG GGCCAGTGCG GTGGCATCGG CTTCAATGGC    120

     CCGACTTGCT GCCAGTCTGG TAGCACTTGC GTGAAGCAGA ACGACTGGTA CTCCCAGTGC    180
                                                                            :
  5  CTGCCTGGCA GCCAGGTGAC GACGTCGACC ACCTCGAGCT CGTCGACGAC GTCTCGCGCC    240

     ACCTCCACCA CCAGCGCTGG TGGCGTGACC TCGATCACCA CTGCTCCCAC CCGCACCGTC    300

     ACCATCCCCG GCGGTGCCTC GACCACTGCC AGCTACAACG GCAACCCCTT CGAGGGTGTT    360
 10
     CAGCTTTGGG CCAACAACTA CTACCGGTCC GAAGTTCACA CTCTTGCCAT CCCTCAGATC    420

     ACTGACCCTG CCCTGAGGGC TGCGGCCTCT GCTGTTGCCG AGGTTCCCAG CTTCCAGTGG    480

 15  CTCGACCGGA ACGTCACCGT CGACACCCTG CTCGTCCAGA CCCTCTCTGA GATCCGCGAG    540

     GCGAACCAAG CGGGCGCGAA TCCCCAATAT GCTGCCCAAA TCGTCGTTTA CGACTTGCCT    600

     GACCGCGACT GCGCTGCCGC GGCTTCGAAC GGCGAGTGGG CCATCGCCAA CAACGGCGTC    660
 20
     AACAACTACA AGGCATACAT CAACCGCATC CGCGAGATTC TCATTTCCTT CTCGGATGTC    720

     CGCACCATTC TGGTCATTGA GCCCGACTCG CTGGCCAACA TGGTCACCAA CATGAACGTT    780

 25  CCCAAGTGCA GCGGTGCCGC CTCGACCTAC CGCGAGTTGA CCATCTATGC CCTCAAGCAG    840

     CTCGACCTCC CGCACGTCGC CATGTACATG GACGCCGGCC ACGCTGGCTG GCTTGGCTGG    900

     CCCGCCAACA TCCAGCCCGC CGCTGAGCTC TTCGCCAAGA TCTACGAGGA TGCCGGCAAG    960
 30
     CCCCGCGCCG TCCGCGGTCT CGCCACCAAC GTCGCCAACT ACAACGCCTG GAGCGTCTCG   1020

     AGCCCGCCGC CCTACACCAG CCCCAACCCC AACTACGACG AGAAGCACTA CATCGAGGCC   1080

 35  TTCCGCCCCC TCCTCGAGGC CCGCGGCTTC CCCGCCCAGT TCATCGTCGA CCAGGGCCGC   1140

     AGCGGCAAGC AGCCCACCGG CCAGAAGGAA TGGGGCCACT GGTGTAATGC TATCGGTACG   1200

     GGCTTCGGTA TGCGCCCTAC TGCCAACACC GGCCACCAGT ACGTCGATGC CTTCGTCTGG   1260
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GTCAAGCCCG GCGGTGAGTG CGACGGCACC AGCGACACGA CCGCTGCCCG CTACGACTAC   1320

CACTGCGGTC TCGAGGACGC CCTCAAGCCC GCCCCTGAAG CTGGTCAGTG GTTTAATGAA   1380

TATTTTATTC AGTTGCTGCG TAACGCCAAC CCGCCGTTCT AG   1422

(2)   INFORMATION FOR SEQ ID NO: 2:
        (i)   SEQUENCE CHARACTERISTICS:
                (A)   LENGTH: 473 amino acids
                (B)   TYPE: amino acid
                (C)   STRANDEDNESS: single
                (D)   TOPOLOGY: linear
        (ii) MOLECULE TYPE: protein
        (vi) ORIGINAL SOURCE:
                (A)   ORGANISM: Humicola insolens DSM 1800

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

    Met Ala Lys Phe Phe Leu Thr Ala Ala Phe Ala Ala Ala Ala Leu Ala
    1   5   10   15

    Ala Pro Val Val Glu Glu Arg Gln Asn Cys Ala Ser Thr Trp Gly Gln
                    20   25   30

    Cys Gly Gly Ile Gly Phe Asn Gly Pro Thr Cys Cys Gln Ser Gly Ser
                35   40   45

    Thr Cys Val Lys Gln Asn Asp Trp Tyr Ser Gln Cys Leu Pro Gly Ser
            50   55   60

    Gln Val Thr Thr Ser Thr Thr Ser Ser Ser Ser Thr Thr Ser Arg Ala
    65   70   75   80

    Thr Ser Thr Thr Ser Ala Gly Gly Val Thr Ser Ile Thr Thr Ala Pro
                        85   90   95

    Thr Arg Thr Val Thr Ile Pro Gly Gly Ala Ser Thr Thr Ala Ser Tyr
                    100   105   110

```
       Asn Gly Asn Pro Phe Glu Gly Val Gln Leu Trp Ala Asn Asn Tyr Tyr
               115                 120                 125

  5    Arg Ser Glu Val His Thr Leu Ala Ile Pro Gln Ile Thr Asp Pro Ala
               130                 135                 140

       Leu Arg Ala Ala Ala Ser Ala Val Ala Glu Val Pro Ser Phe Gln Trp
       145                 150                 155                 160
 10
       Leu Asp Arg Asn Val Thr Val Asp Thr Leu Leu Val Gln Thr Leu Ser
                   165                 170                 175

       Glu Ile Arg Glu Ala Asn Gln Ala Gly Ala Asn Pro Gln Tyr Ala Ala
 15                180                 185                 190

       Gln Ile Val Val Tyr Asp Leu Pro Asp Arg Asp Cys Ala Ala Ala Ala
                   195                 200                 205

 20    Ser Asn Gly Glu Trp Ala Ile Ala Asn Asn Gly Val Asn Asn Tyr Lys
               210                 215                 220

       Ala Tyr Ile Asn Arg Ile Arg Glu Ile Leu Ile Ser Phe Ser Asp Val
       225                 230                 235                 240
 25
       Arg Thr Ile Leu Val Ile Glu Pro Asp Ser Leu Ala Asn Met Val Thr
                   245                 250                 255

       Asn Met Asn Val Pro Lys Cys Ser Gly Ala Ala Ser Thr Tyr Arg Glu
 30                260                 265                 270

       Leu Thr Ile Tyr Ala Leu Lys Gln Leu Asp Leu Pro His Val Ala Met
                   275                 280                 285

 35    Tyr Met Asp Ala Gly His Ala Gly Trp Leu Gly Trp Pro Ala Asn Ile
                   290                 295                 300

       Gln Pro Ala Ala Glu Leu Phe Ala Lys Ile Tyr Glu Asp Ala Gly Lys
               305                 310                 315                 320
```

```
        Pro Arg Ala Val Arg Gly Leu Ala Thr Asn Val Ala Asn Tyr Asn Ala
                        325                 330                 335

5       Trp Ser Val Ser Ser Pro Pro Pro Tyr Thr Ser Pro Asn Pro Asn Tyr
                        340                 345                 350

        Asp Glu Lys His Tyr Ile Glu Ala Phe Arg Pro Leu Leu Glu Ala Arg
                        355                 360                 365
10
        Gly Phe Pro Ala Gln Phe Ile Val Asp Gln Gly Arg Ser Gly Lys Gln
                        370                 375                 380

        Pro Thr Gly Gln Lys Glu Trp Gly His Trp Cys Asn Ala Ile Gly Thr
15      385                 390                 395                 400

        Gly Phe Gly Met Arg Pro Thr Ala Asn Thr Gly His Gln Tyr Val Asp
                            405                 410                 415

20      Ala Phe Val Trp Val Lys Pro Gly Gly Glu Cys Asp Gly Thr Ser Asp
                        420                 425                 430

        Thr Thr Ala Ala Arg Tyr Asp Tyr His Cys Gly Leu Glu Asp Ala Leu
                        435                 440                 445
25
        Lys Pro Ala Pro Glu Ala Gly Gln Trp Phe Asn Glu Tyr Phe Ile Gln
                        450                 455                 460

        Leu Leu Arg Asn Ala Asn Pro Pro Phe
30      465                 470
```

(2) INFORMATION FOR SEQ ID NO: 3:
    (i) SEQUENCE CHARACTERISTICS:
        (A) LENGTH: 1483 base pairs
35   (B) TYPE: nucleic acid
        (C) STRANDEDNESS: single
        (D) TOPOLOGY: linear
    (ii) MOLECULE TYPE: DNA (genomic)
    (vi) ORIGINAL SOURCE:

(A) ORGANISM: Humicola insolens   DSM 1800

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

```
 5   CCTAGGTCGC CCACCATGCG CGTTTCTCTT GCTCTCCTCG CCTACCTGCT CAGCGCCGCC      60

     GGCGCCTCGC CCGTCCCGGA GCTCGAGCCC CGGCAGTCCG GCAACCCCTT CTCCGGCCGC     120

     ACCCTGCTGG TCAACTCGGA CTATAGCAGC AAGCTCGACC AGACGCGCCA GGCCTTCCTG     180
10   TCCCGCGGCG ACCAGACCAA CGCTGCCAAG GTCAAGTACG TCCAGGAGAA GGTTGGCACC     240

     TTCTATTGGA TCTCCAACAT CTTCCTCCTG CGCGACATCG ACGTTGCCAT CCAGAATGCG     300

15   CGCGCCGCCA AGGCCCGCGG CGAGAACCCC ATCGTCGGTC TCGTCCTGTA CAACCTCCCC     360

     GACCGCGACT GCAGCGCCGG CGAGTCCTCT GGCGAGCTTA AGCTCTCCCA GAACGGCCTG     420

     AACCGGTACA AGAACGAGTA CGTCAACCCG TTCGCCCAGA AGCTCAAGGC CGCGTCCGAC     480
20   GTGCAGTTCG CCGTCATCCT CGAGCCCGAT GCCATCGGCA ACATGGTCAC GGGCACCAGC     540

     GCCTTCTGCC GCAACGCCCG CGGCCCTCAG CAGGAGGCCA TCGGCTATGC TATCTCTCAG     600

25   CTCCAGGCCA GCCACATCCA CCTCTACCTG GATGTCGCCA ACGGCGGCTG GCTCGGCTGG     660

     GCCGATAAGC TCGAGCCAAC TGCCCAGGAG GTCGCCACCA TCCTCCAAAA GGCCGGTAAC     720

     AACGCCAAGA TCCGCGGCTT CTCCAGCAAC GTCTCCAACT ACAACCCCTA TTCCACCAGC     780
30   AACCCGCCGC CCTACACCTC GGGCAGCCCG TCGCCCGACG AGTCGCGCTA CGCCACCAAC     840

     ATCGCCAACG CCATGCGCCA GCGCGGCCTG CCGACCCAGT TCATCATCGA CCAGAGCCGC     900

35   GTCGCGCTCA GCGGCGCCCG CAGCGAGTGG GGCCAATGGT GCAACGTGAA CCCCGCCGGC     960

     TTCGGCCAGC CCTTCACCAC CAACACCAAC AACCCCAACG TCGACGCCAT CGTCTGGGTC    1020

     AAGCCCGGCG GCGAGTCGGA CGGCCAGTGC GGCATGGGCG CGCCCCGGC CGCCGGCATG    1080
```

TGGTTCGACG CGTACGCGCA GATGCTGACG CAGAACGCCC ACGACGAGAT CGCCCGCGGC   1140

GCTGCCGGCA GTGGTGGTGG CAACAACGGC GGCGGCAACA ACCCCAACCC GACCCCGACC   1200

AACCCGACAA ACCCGGGCCC GACCAGCAAC CCGGGCGGCG GCAACTGCGC CAGCAAGTGG   1260

GGCCAGTGCG GTGGTCAGGG ATGGGCCGGC CCGACCTGCT GCGAGGCTGG GTCGACTTGC   1320

ACCCGCCAGA ACGAGTGGTA CTCACAGTGC CTGTAAAGAA AAAAGAGTGC GGTTGCTGTC   1380

ACGGGTGTGA CGTTGTATAT AGCACGTCCC CGGTTAGGCT TTAGAGCACA CTGGCGGCCG   1440

CTCGAGCATG CATCTAGAGG GTGACTGACA CCTGGCGGTA GAC   1483

(2) INFORMATION FOR SEQ ID NO: 4:

        (i) SEQUENCE CHARACTERISTICS:

                (A) LENGTH: 446 amino acids

                (B) TYPE: amino acid

                (C) STRANDEDNESS: single

                (D) TOPOLOGY: linear

        (ii) MOLECULE TYPE: protein

        (vi) ORIGINAL SOURCE:

                (A) ORGANISM: Humicola insolens   DSM 1800

        (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:

        Met Arg Val Ser Leu Ala Leu Leu Ala Tyr Leu Leu Ser Ala Ala Gly
        1   5   10   15

        Ala Ser Pro Val Pro Glu Leu Glu Pro Arg Gln Ser Gly Asn Pro Phe
                        20   25   30

        Ser Gly Arg Thr Leu Leu Val Asn Ser Asp Tyr Ser Ser Lys Leu Asp
                    35   40   45

        Gln Thr Arg Gln Ala Phe Leu Ser Arg Gly Asp Gln Thr Asn Ala Ala
                    50   55   60

Lys Val Lys Tyr Val Gln Glu Lys Val Gly Thr Phe Tyr Trp Ile Ser
65   70   75   80

Asn Ile Phe Leu Leu Arg Asp Ile Asp Val Ala Ile Gln Asn Ala Arg
                85   90   95

Ala Ala Lys Ala Arg Gly Glu Asn Pro Ile Val Gly Leu Val Leu Tyr
            100   105   110

Asn Leu Pro Asp Arg Asp Cys Ser Ala Gly Glu Ser Ser Gly Glu Leu
            115   120   125

Lys Leu Ser Gln Asn Gly Leu Asn Arg Tyr Lys Asn Glu Tyr Val Asn
        130   135   140

Pro Phe Ala Gln Lys Leu Lys Ala Ala Ser Asp Val Gln Phe Ala Val
145   150   155   160

Ile Leu Glu Pro Asp Ala Ile Gly Asn Met Val Thr Gly Thr Ser Ala
            165   170   175

Phe Cys Arg Asn Ala Arg Gly Pro Gln Gln Glu Ala Ile Gly Tyr Ala
        180   185   190

Ile Ser Gln Leu Gln Ala Ser His Ile His Leu Tyr Leu Asp Val Ala
        195   200   205

Asn Gly Gly Trp Leu Gly Trp Ala Asp Lys Leu Glu Pro Thr Ala Gln
        210   215   220

Glu Val Ala Thr Ile Leu Gln Lys Ala Gly Asn Asn Ala Lys Ile Arg
225   230   235   240

Gly Phe Ser Ser Asn Val Ser Asn Tyr Asn Pro Tyr Ser Thr Ser Asn
            245   250   255

Pro Pro Pro Tyr Thr Ser Gly Ser Pro Ser Pro Asp Glu S r Arg Tyr
            260   265   270

```
        Ala Thr Asn Ile Ala Asn Ala Met Arg Gln Arg Gly Leu Pro Thr Gln
                275                 280                 285


        Phe Ile Ile Asp Gln Ser Arg Val Ala Leu Ser Gly Ala Arg Ser Glu
  5         290                 295                 300


        Trp Gly Gln Trp Cys Asn Val Asn Pro Ala Gly Phe Gly Gln Pro Phe
        305                 310                 315                 320


 10     Thr Thr Asn Thr Asn Asn Pro Asn Val Asp Ala Ile Val Trp Val Lys
                        325                 330                 335


        Pro Gly Gly Glu Ser Asp Gly Gln Cys Gly Met Gly Gly Ala Pro Ala
                340                 345                 350
 15
        Ala Gly Met Trp Phe Asp Ala Tyr Ala Gln Met Leu Thr Gln Asn Ala
                355                 360                 365


        His Asp Glu Ile Ala Arg Gly Ala Ala Gly Ser Gly Gly Gly Asn Asn
 20         370                 375                 380


        Gly Gly Gly Asn Asn Pro Asn Pro Thr Pro Thr Asn Pro Thr Asn Pro
        385                 390                 395                 400


 25     Gly Pro Thr Ser Asn Pro Gly Gly Gly Asn Cys Ala Ser Lys Trp Gly
                        405                 410                 415


        Gln Cys Gly Gly Gln Gly Trp Ala Gly Pro Thr Cys Cys Glu Ala Gly
                420                 425                 430
 30
        Ser Thr Cys Thr Arg Gln Asn Glu Trp Tyr Ser Gln Cys Leu
                435                 440                 445
```

CLAIMS

1. Cleaning composition comprising one or more enzymes having cellulolytic activity wherein at least 25% of the total weight of cellulolytic active protein derives from the presence of a *Humicola* endo-1,4-β-glucanase or *Humicola*-like cellulase of the glycosyl hydrolase family 6.

2. Cleaning composition according to claim 1, wherein the *Humicola*-like cellulase comprises a catalytically core domain which has an amino acid sequence being at least 35% homologous to SEQ ID NO:4.

3. Cleaning composition according to claim 1 or 2, wherein the endo-1,4-β-glucanase comprises one or two cellulose binding domains (CBD) operably linked to the catalytically active domain.

4. Cleaning composition according to any of the claims 1-3 wherein the composition is a detergent composition.

5. Cleaning composition according to claim 4 wherein the detergent composition comprises one or more components selected from anionic, nonionic, cationic, amphoteric, ampholytic and zwitterionic surfactants, bleaching agents, additional enzymes, sud suppressores, dispersants, soil suspension and anti-redeposition agents, smectite clays, and builder components.

6. Cleaning composition according to claim 4 or 5 wherein the detergent composition is a granular detergent composition containing no more than 40% by weight of inorganic filler salt.

7. Cleaning composition according to claim 6 wherein the granular detergent composition contains no more than 15% by weight of inorganic filler salt.

8. Cleaning composition according to claim 5 wherein the detergent composition is a heavy duty liquid composition.

9. Cleaning composition according to any of the claims 4-8
wherein the enzymes are selected from the group consisting of
proteases, cellulases, β-glucanases, hemicellulases, lipases,
peroxidases, laccases, α-amylase, glucoamylases, cutinases,
5 pectinases, reductases, oxidases, phenoloxidases, ligninases,
pullulanases, arabinosidases or mixtures thereof.

10. Cleaning composition according to any of the claims 4-9
which is a laundry detergent additive.
10
11. Cleaning composition according to any of the claims 1-3
wherein the composition is a fabric softener or fabric condi-
tioning composition for the treatment of fabrics.

15 12. Cleaning composition according to claim 11 wherein the fab-
ric softener composition comprises from about 1% to about 90% of
one or more cationic fabric softening agents, nonionic fabric
softening agents, or mixtures thereof.

20 13. Cleaning composition according to claim 12 comprising from
about 2% to about 50% by weight of one or more fabric softening
agents.

14. Cleaning composition according to claim 12 or 13 wherein the
25 cationic fabric softening agents comprise quaternary ammonium
softening agent or amine precursor thereof.

15. Cleaning composition according to claim 14 wherein the qua-
ternary ammonium softening agent is N,N-di(2-tallowoyl-oxy-
30 ethyl)-N,N-dimethyl ammonium chloride.

16. Cleaning composition according to any of the claims 1-15
wherein endo-1,4-β-glucanase is derived or derivable from the
fungus *Orpinomyces sp.*
35
17. Cleaning composition according to any of the claims 1-15
wherein endo-1,4-β-glucanase is derived or derivable from the
fungus *Neocallimastix patriciarum*.

18. Cleaning composition according to any of the claims 1-15 wherein endo-1,4-β-glucanase is derived or derivable from the fungus *Trichoderma reesei*.

19. Cleaning composition according to any of the claims 1-15 wherein endo-1,4-β-glucanase is derived or derivable from the fungus *Fusarium oxysporum*.

20. Cleaning composition according to any of the claims 1-19 which comprises the family 6 endo-1,4-β-glucanase in an amount corresponding to from about 1 ECU to about 100000 ECU per liter washing or rinsing solution.

21. Cleaning composition according to any of the claims 1-20 which further comprises an endo-1,4-β-glucanase of the glycosyl hydrolase family 5, or an endo-1,4-β-glucanase of the glycosyl hydrolase family 7, or an endo-1,4-β-glucanase of the glycosyl hydrolase family 8, or an endo-1,4-β-glucanase of the glycosyl hydrolase family 9, or an endo-1,4-β-glucanase of the glycosyl hydrolase family 44, or an endo-1,4-β-glucanase of the glycosyl hydrolase family 45, or an endo-1,4-β-glucanase of the glycosyl hydrolase family 48, or an endo-1,4-β-glucanase of the glycosyl hydrolase family 12 optionally being operably linked to a cellu-lose binding domain, or any mixture thereof.

22. A process for machine treatment of fabrics which process comprises treating fabric during a rinse cycle of a machine washing process with a rinse solution containing the composition according to any of the claims 11-21.

23. A method of constructing a variant of a parent *Humicola* family 6 endo-beta-1,4-glucanase, which variant has endo-beta-1,4-glucanase activity and improved detergent compability as compared to the parent endo-beta-1,4-glucanase, which method comprises

i) analysing the structure of the parent *Humicola* family 6 endo-
beta-1,4-glucanase to identify at least one amino acid residue or
at least one structural part of the *Humicola* family 6 endo-beta-
5   1,4-glucanase catalytically core domain structure, which amino
acid residue or structural part is believed to be of relevance for
altering the detergent compatibility of the parent *Humicola* family
6 endo-beta-1,4-glucanase as evaluated on the basis of structural
or functional considerations,

10

ii) constructing a *Humicola* family 6 endo-beta-1,4-glucanase
variant, which as compared to the parent *Humicola* family 6 endo-
beta-1,4-glucanase has been modified in the amino acid residue or
structural part identified in i) so as to alter the detergent
15   compatibility, and, optionally,

iii) testing the resulting *Humicola* family 6 endo-beta-1,4-
glucanase variant with respect to detergent compatibility.

20   24. The method according to claim 23, wherein the structural part
to be modified is the binding cleft, the loop region encompassing
the binding cleft, or the side chain of the catalytic acid Asp139.

25. A variant of a parent *Humicola* family 6 endo-beta-1,4-
25   glucanase, which comprises a mutation in a position corresponding
to at least one of the following positions in SEQ ID NO:4: K20,
S56, S94, A95, K103, A182, N183 and Q318.

26. The variant according to claim 25, which comprises at least
30   one of the mutations:
          K20E
          S56D
          S94D
          A95G
35   K103E
          K103Q
          A182G
          N183E

A182G+N183H

Q318E

27. A method of constructing a variant of a parent *Humicola*-like
family 6 cellulase, which variant has endo-beta-1,4-glucanase
activity and improved detergent compatibility as compared to the
parent cellulase, which method comprises
i) comparing the three-dimensional structure of the *Humicola* endo-
beta-1,4-glucanase with the structure of a *Humicola*-like
cellulase,
ii) identifying a part of the *Humicola*-like cellulase structure
which is different from the *Humicola* endo-beta-1,4-glucanase
structure and which from structural or functional considerations
is contemplated to be responsible for differences in the detergent
compatibility of the *Humicola* endo-beta-1,4-glucanase and
Humicola-like cellulase,
iii) modifying the part of the *Humicola*-like cellulase identified
in ii) whereby a *Humicola*-like endo-beta-1,4-glucanase variant is
obtained, which has an improved detergent compatibility compared
to the parent *Humicola*-like cellulase , and optionally,
iv) testing the resulting *Humicola*-like endo-beta-1,4-glucanase
variant with respect to detergent compatibility.

28. The method according to claim 27, wherein, in step iii), the
part of the *Humicola*-like cellulase is modified so as to resemble
the corresponding part of the *Humicola* family 6 endo-beta-1,4-
glucanase.

29. The method according to claim 27 or 28, wherein, in step iii),
the modification is accomplished by deleting one or more amino
acid residues of the part of the *Humicola*-like cellulase to be
modified; or the modification is accomplished by replacing one or
more amino acid residues of the part of the *Humicola*-like
cellulase to be modified with the amino acid residues occupying
corresponding positions in the *Humicola* endo-beta-1,4-glucanase;
or the modification is accomplished by insertion of one or more
amino acid residues present in the *Humicola* endo-beta-1,4-
glucanase into a corresponding position in the *Humicola*-like
cellulase.

30. The method according to any of claims 27-29, wherein the *Humicola*-like cellulase is selected from the group consisting of *Neocallimastix patriciarum* endo-beta-1,4-glucanase, *Orpinomyces sp.* endo-beta-1,4-glucanase, *Trichoderma reseei* exoglucanase, *Agaricus bispora* exoglucanase, *Phanerochaete chrysosporium* exoglucanse, *Penicillium purpurogenum* exoglucanase, *Acremonium cellulyticus* exoglucanase, *Fusarium oxysporum* exoglucanase and homologues thereof.

31. The method according to claim 23 or 27, wherein the parent *Humicola* endo-beta-1,4-glucanase is derived from a strain of *Humicola insolens*.

32. The method according to claim 31, wherein the parent *Humicola* endo-beta-1,4-glucanase is derived from *Humicola insolens*, DSM 1800.

33. An isolated polynucleotide molecule comprising a DNA sequence encoding an endo-beta-1,4-glucanase variant according to claim 26.

34. A recombinant expression vector which carries the polynucleotide molecule according to claim 33.

35. A cell which is transformed with the polynucleotide molecule according to claim 33 or a vector according to claim 34.

36. The cell according to claim 35, which is a microorganism.

37. The cell according to claim 36, which is a bacterium or a fungus.

38. A cell according to claim 37, which is a *Fusarium oxysporum*, an *Aspergillus niger* or an *Aspergillus oryzae* cell.

39. Cleaning composition comprising an endo-beta-1,4-glucanase which is constructed using the method according to any of the claims 23, 24 and 27-32.

1/11

```
!SS_HI_CEL6B    -----.........SS...HHHHHHHHHHHHHHH....HHHHHHHHHHHHH....SSS.
HI_CEL6B        ------QSGNPFSGRTLLVNSDYSSKLDQTRQAFLSRGDQTNAAKVKYVQEKVGTFYWIS
AC              ------ASGNPFSGYQLYANPYYSSQEVHTLAIPSLTG--S-LAAAATKAAEIPSFVWLD
PP              ------ASGNPFSGYQLYANPYYSSEVHTLAIPSLTGS----LAAAATKAAEIPSFVWLD
P07987          ------YSGNPFVGVTPWANAYYASEVSSLAIPSLTGA----MATAAAAVAKVPSFMWLD
P46236          ------ASDNPYAGVDLWANNYYRSEVMNLAVPKLSGA----KATAAAKVADVPSFQWMD
HI_CEL6A        ------YNGNPFEGVQLWANNYYRSEVHTLAIPQITDP---ALRAAASAVAEVPSFQWLD
E11341          ------YNGNPFEGVQLWANNYYRSEVHTLAIPQITDP---ALRAAASAVAEVPSFQWLD
P49075          ------GAGNPYTGKTVWLSPFYADEVAQAAADISNPS----LATKAASVAKIPTFVWFD
Q02321          ------SANNPWTGFQIFLSPYYANEVAAAAKQITDPT----LSSKAASVANIPTFTWLD
P78721          ------PTSDNFFENELYSNYKFQGEVDQSIQRLSGS-----LQEKAKKVKYVPTAAWLA
P78720          ------PSSDNFFENEIYSNYKFQGEVDISIKKLNGD-----LKAKAEKVKYVPTAVWLA
Q12646          NNGWGSGSTKNFFDNQIYANPKFIEEVNSSIPRLSYD-----LQQKAQKVKNVPTAVWLA
                    . :       . : :                        : :  *:
!SS_HI_CEL6B    .-....HHHHHHHHHHHHH-HH....SSSSSSS..-..................HHHH
HI_CEL6B        N-IFLLRDIDVAIQNARAA-KARGENPIVGLVLYN-LPDRDCSAGESSGELKLSQNGLNR
AC              T-AAKVPTMGTYLANIEAANKAGASPPIAGFVVYD-LPDRDCAAAASNGEYTVANNGVAN
PP              T-AAKVPTMGTYLANIEAANKAGASPPIAGIFVVYDLPDRDCAAAASNGEYTVANNGVAN
P07987          T-LDKTPLMEQTLADIRTANKNGG--NYAGQFVVYDLPDRDCAALASNGEYSIADGGVAK
P46236          T-YDHISLMEDTLADIRKANKAGG--KYAGQFVVYDLPNRDCAAAASNGEYSLDKDGANK
HI_CEL6A        RNVTVDTLLVQTLSEIREANQAGANPQYAAQIVVYDLPDRDCAAAASNGEWAIANNGVNN
E11341          RNVTVDTLLVETLSEIRAANQAGANPPYAAQIVVYDLPDRDCAAAASNGGIWAANNGANN
P49075          T-VAKVPDLGGYLADARSK------NQLVQIVVYDLPDRDCAALASNGEFSLANDGLNK
Q02321          S-VAKIPDLGTYLASASALGKSTG-TKQLVQIYDLPDRDCAAKASNGEFSIANNGQAN
P78721          W-SGATNEVARYLNEAGSK--------TVVFVLYMIPTRDCNAGGSNG----GADNLST
P78720          W-DGAPQEVPRYLQEAGNK--------TVVFVLYMIPTRDCGANASAG----GSATIDK
Q12646          W-DGATGEVAQHLKAAGSK--------TVVFIMYMIPTRDCNANASAG----GAGNLNT
                  :  :                     .:  :* *** *  * *
!SS_HI_CEL6B    HHHH.HHHHHHHHHH.....SSSSS...HHHHHHH...-HHHHHHHHHHHHHHHHHHH..
HI_CEL6B        YKNEYVNPFAQKLKAASDVQFAVILEPDAIGNMVTGTS-AFCRNARGPQQEAIGYAISQL
AC              YK-AYIDSIVAQLKAYPDVHTILIIEPDSLANMVTNLSTAKCAEAQSAYYECVNYALINL
PP              YK-AYIDSIVAQLKAYPDVHTILIIEPDSLANMVTNLSTAKCAEAQSAYYECVNYALINL
P07987          YK-NYIDTIRQIVVEYSDIRTLLVIEPDSLANLVTNLGTPKCANAQSAYLECINYAVTQL
P46236          YK-AYIAKIKGILQNYSDTKVILVIEPDSLANLVTNLNVDKCAKAESAYKELTVYAIKEL
HI_CEL6A        YK-AYINRIREILISFSDVRTILVIEPDSLANMVTNMNVPKCSGAASTYRELTIYALKQL
E11341          YK-GYINRIREILISFSDVRTILVIEPDSLANMVTNMNVAKCSGAASTYRELTIYALKQL
P49075          YK-NYVDQIAAQIKQFPDVSVVAVIEPDSLANLVTNLNVQKCANAQSAYKEGVIYAVQKL
Q02321          YE-NYIDQIVAQIQQFPDVRVVAVIEPDSLANLVTNLNVQKCANAKTTYLACVNYALTNL
P78721          YQ-GYVNSIYNTINQYPNSRIVMIIEPDTIGNLVTANN-ANCRNVHDMHKQALSYAISKF
P78720          YK-GYINNIYNTSNQYKNSKIVMILEPDTIGNLVTNNN-DNCRNVRNMHKQALSYAISKF
Q12646          YK-GYVDNIARTIRSYPNSKVVMILEPDTLGNLVTANS-ANCQNVRNLHKNALSYGVNVF
                *:  *:  :       :    ::***:..*:**  . *  .      *.: :
!SS_HI_CEL6B    -....SSSSS...HHHH.....HHHHHHHHHHHHHHHH.......SSSS...........
HI_CEL6B        -QASHIHLYLDVANGGWLGWADKLEPTAQEVATILQKAGNNAKIRGFSSNVSNYNPYSTS
AC              -NLANVAMYIDAGHAGWLGWSANLSPAAQLFATVYKNASAPASLRGLATNVANYNAWSIS
PP              -NLANVAMYIDAGHAGWLGWSANLSPAAELFATVYKNASAPAALRGLATNVANYNGWNIT
P07987          -NLPNVAMYLDAGHAGWLGWPANQDPAAQLFANVYKNASSPRALRGLATNVANYNGWNIT
P46236          -NLPNVSMYLDAGHGGWLGWPANIGPAAKLYAQIYKDAGKPSRVRGLVTNVSNYNGWKLS
HI_CEL6A        -DLPHVAMYMDAGHAGWLGWPANIQPAAELFAKIYEDAGKPRAVRGLATNVANYNAWSVS
E11341          -DLPHVAMYMDAGHAGWLGTPANIQPAAELFAKIYEDAGKPRAVRGLATNVANYNAWSVS
P49075          -NAVGVTMYIDAGHAGWLGWPANLSPAAQLFAQIYRDAGSPRNLRGIATNVANFNALRAS
Q02321          -AKVGVYMYMDAGHAGWLGWPANLSPAAQLFTQVWQNAGKSPFIKGLATNVANYNALQAA
P78721          GTQKNVRVYLDAAHGGWLN--SSADRTAEVIAEILRNAGN-GKIRGISTNVSNY------
P78720          GTQSHVKVYLDAAHGAWLN--QYADQTANVIKEILNNAGS-GKLRGISTNVSNYQS-IES
Q12646          GSMSNVSVYLDAAHGAWLG--SSTDKVASVVKEILNNAPN-GKIRGLSTNISNYQS--IS
                : :*:*..:..**.       .*.   : ..*    ::*: :*::*:
```

FIGURE 1A

```
!SS_HI_CEL6B    ...............HHHHHHHHHHHHH.....-.SSSSS...SS.......-.-.......
HI_CEL6B        NPPPYTSGSPSPDESRYATNIANAMRQRGLP-TQFIIDQSRVALSGARSE-W-GQWCNVN
AC              SPPSYTSGDSNYDEKLYINALSPLLTSNGWPNAHFIMDTSRNGVQPTKQQAW-GDWCNVI
PP              SPPSYTSGDSNYDEQLYINALSPLLTSNGWPNAHFIMDTSRNGVQPTKQQAW-GDWCNVI
P07987          SPPSYTQGNAVYNEKLYIHAIGPLLANHGWSNAFFITDQGRSGKQPTGQQQW-GDWCNVI
P46236          TKPDYTESNPNYDEQRYINAFAPLLAQEGWSNVKFIVDQGRSGKQPTGQKAQ-GDWCNAK
HI_CEL6A        SPPPYTSPNPNYDEKHYIEAFRPLLEARGFP-AQFIVDQGRSGKQPTGQKEW-GHWCNAI
E11341          SPPPYTSPNPNYDEKHYIEAFRPLLEARGFP-AQFIVDQGRSGKQPTGQKEW-GHTCNAI
P49075          SPDPITQGNSNYDEIHYIEALAPMLSNAGFP-AHFIVDQGRSGVQNIRDQ-W-GDWCNVK
Q02321          SPDPITQGNPNYDEIHYINALAPLLQQAGWD-ATFIVDQGRSGVQNIRQQ-W-GDWCNIK
P78721          -QPVYS-------EYQYHQNLNRALESRGVRGMKFIVDTSRNGRNPSSAT-----WCNLK
P78720          ------------EYKYHQNLNRALESKGVRGLKFIVDTSRNGANVEGAFNASGTWCNFK
Q12646          S-----------EYQYHQKLASALAAVGVPNMHFIVDTGRNGVTINSGT-----WCNLV
                        *    *     :     :    *      ** *  .*  .           **
```

```
!SS_HI_CEL6B    .SS.........---....SSSSS..........------------....----.....
HI_CEL6B        PAGFGQPFTTNT---NNPNVDAIVWVKPGGESDGQ-----------CGMGG----APAAG
AC              GTGFGVQPTTNT---GDPLEDAFVWVKPGGESDGTSNSSATRYDFHCGYSDALQPAPEAG
PP              GTGFGVQPTTNT---GDPLEDAFVWVKPGGESDGTSNSSATRYDYHCGYSDALQPAPEAG
P07987          GTGFGIRPSANT---GDSLLDSFVWVKPGGECDGTSDSSAPRFDSHCALPDALQPAPQAG
P46236          GTGFGLRPSTNT---GDALADAFVWVKPGGESDGTSDTSAARYDYHCGLDDALKPAPEAG
HI_CEL6A        GTGFGMRPTANT---GHQYVDAFVWVKPGGECDGTSDTTAARYDYHCGLEDALKPAPEAG
E11341          GTGFGMRPTANT---GHQYVDAFVWVKPGGECDGTSDTTAARYDYHCGLEDALKPAPEAG
P49075          GAGFGQRPTTNT---GSSLIDAIVWVKPGGECDGTSDNSSPRFDSHCSLSDAHQPAPEAG
Q02321          GAGFGTRPTTNT---GSQFIDSIVWVKPGGECDGTSNSSSPRYDSTCSLPDAAQPAPEAG
P78721          GAGLGARPQANPDP-NMPLLDAYVWIKTPGESDSASS--A---DPVCRNSDSLQGAPAAG
P78720          GAGLGQRPKGNPNPGSMPLLDAYMWIKTPGEADGSSQ--GSRADPVCARGDSLQGAPDAG
Q12646          GTGLGERPRGNPN-AGMPLLDAYMWLKTPGESDGSSS--GSRADPNCSSNDSLRGAPDAG
                :*:*     *.    .    *: :*:*. **.*.          *    .    ** **
```

```
!SS_HI_CEL6B    ...HHHHHHHH.......
HI_CEL6B        MWFDAYAQMLTQNAHDEIA
AC              TWFQAYFVQLLTNANPALV
PP              TWFQAYFVQLLTNANPALV
P07987          AWFQAYFVQLLTNANPSFL
P46236          TWFQAYFEQLLDNANPSFL
HI_CEL6A        QWFNEYFIQLLRNANPPF-
E11341          QWFQAYFEQLLRNANPPF-
P49075          TWFQAYFETLVANANPAL-
Q02321          TWFQAYFQTLVSAANPPL-
P78721          SWFHDYFVMLLENANPPF-
P78720          SWFHEYFTMLIQNANPPF-
Q12646          QWFHDYFAQLVRNARPSF-
                **. *   *   *. :
```

FIGURE 1B

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```
   1 GGATCCAAGA TGGCCAAGTT TTTCCTTACT GCTGCCTTTG CGGCTGCCGC TCTCGCCGCT
  61 CCCGTTGTTG AGGAGCGCCA GAACTGTGCC TCGACTTGGG GCCAGTGCGG TGGCATCGGC
 121 TTCAATGGCC CGACTTGCTG CCAGTCTGGT AGCACTTGCG TGAAGCAGAA CGACTGGTAC
 181 TCCCAGTGCC TGCCTGGCAG CCAGGTGACG ACGTCGACCA CCTCGAGCTC GTCGACGACG
 241 TCTCGCGCCA CCTCCACCAC CAGCGCTGGT GGCGTGACCT CGATCACCAC TGCTCCCACC
 301 CGCACCGTCA CCATCCCCGG CGGTGCCTCG ACCACTGCCA GCTACAACGG CAACCCCTTC
 361 GAGGGTGTTC AGCTTTGGGC CAACAACTAC TACCGGTCCG AAGTTCACAC TCTTGCCATC
 421 CCTCAGATCA CTGACCCTGC CCTGAGGGCT GCGGCCTCTG CTGTTGCCGA GGTTCCCAGC
 481 TTCCAGTGGC TCGACCGGAA CGTCACCGTC GACACCCTGC TCGTCCAGAC CCTCTCTGAG
 541 ATCCGCGAGG CGAACCAAGC GGGCGCGAAT CCCCAATATG CTGCCCAAAT CGTCGTTTAC
 601 GACTTGCCTG ACCGCGACTG CGCTGCCGCG GCTTCGAACG GCGAGTGGGC CATCGCCAAC
 661 AACGGCGTCA ACAACTACAA GGCATACATC AACCGCATCC GCGAGATTCT CATTTCCTTC
 721 TCGGATGTCC GCACCATTCT GGTCATTGAG CCCGACTCGC TGGCCAACAT GGTCACCAAC
 781 ATGAACGTTC CCAAGTGCAG CGGTGCCGCC TCGACCTACC GCGAGTTGAC CATCTATGCC
 841 CTCAAGCAGC TCGACCTCCC GCACGTCGCC ATGTACATGG ACGCCGGCCA CGCTGGCTGG
 901 CTTGGCTGGC CGCCAACAT  CCAGCCCGCC GCTGAGCTCT CGCCAAGAT  CTACGAGGAT
 961 GCCGGCAAGC CCCGCGCCGT CCGCGGTCTC GCCACCAACG TCGCCAACTA CAACGCCTGG
1021 AGCGTCTCGA GCCCGCCGCC CTACACCAGC CCCAACCCCA ACTACGACGA GAAGCACTAC
1081 ATCGAGGCCT TCCGCCCCCT CCTCGAGGCC CGCGGCTTCC CCGCCCAGTT CATCGTCGAC
1141 CAGGGCCGCA GCGGCAAGCA GCCCACCGGC CAGAAGGAAT GGGGCCACTG GTGTAATGCT
1201 ATCGGTACGG GCTTCGGTAT GCGCCCTACT GCCAACACCG GCCACCAGTA CGTCGATGCC
1261 TTCGTCTGGG TCAAGCCCGG CGGTGAGTGC GACGGCACCA GCGACACGAC CGCTGCCCGC
1321 TACGACTACC ACTGCGGTCT CGAGGACGCC CTCAAGCCCG CCCCTGAAGC TGGTCAGTGG
1381 TTTAATGAAT ATTTTATTCA GTTGCTGCGT AACGCCAACC CGCCGTTCTA GTCTAGA
```

FIGURE 2

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```
   1 GGATCCACTA GTAACGGCCG CCAGTGTGCT CTAAAGCCTA GGTCGCCCAC CATGCGCGTT
  61 TCTCTTGCTC TCCTCGCCTA CCTGCTCAGC GCCGCCGGCG CCTCGCCCGT CCCGGAGCTC
 121 GAGCCCCGGC AGTCCGGCAA CCCCTTCTCC GGCCGCACCC TGCTGGTCAA CTCGGACTAT
 181 AGCAGCAAGC TCGACCAGAC GCGCCAGGCC TTCCTGTCCC GCGGCGACCA GACCAACGCT
 241 GCCAAGGTCA AGTACGTCCA GGAGAAGGTT GGCACCTTCT ATTGGATCTC CAACATCTTC
 301 CTCCTGCGCG ACATCGACGT TGCCATCCAG AATGCGCGCG CCGCCAAGGC CCGCGGCGAG
 361 AACCCCATCG TCGGTCTCGT CCTGTACAAC CTCCCCGACC GCGACTGCAG CGCCGGCGAG
 421 TCCTCTGGCG AGCTTAAGCT CTCCCAGAAC GGCCTGAACC GGTACAAGAA CGAGTACGTC
 481 AACCCGTTCG CCCAGAAGCT CAAGGCCGCG TCCGACGTGC AGTTCGCCGT CATCCTCGAG
 541 CCCGATGCCA TCGGCAACAT GGTCACGGGC ACCAGCGCCT TCTGCCGCAA CGCCCGCGGC
 601 CCTCAGCAGG AGGCCATCGG CTATGCTATC TCTCAGCTCC AGGCCAGCCA CATCCACCTC
 661 TACCTGGATG TCGCCAACGG CGGCTGGCTC GGCTGGGCCG ATAAGCTCGA GCCAACTGCC
 721 CAGGAGGTCG CCACCATCCT CCAAAAGGCC GGTAACAACG CCAAGATCCG CGGCTTCTCC
 781 AGCAACGTCT CCAACTACAA CCCCTATTCC ACCAGCAACC CGCCGCCCTA CACCTCGGGC
 841 AGCCCGTCGC CCGACGAGTC GCGCTACGCC ACCAACATCG CCAACGCCAT GCGCCAGCGC
 901 GGCCTGCCGA CCCAGTTCAT CATCGACCAG AGCCGCGTCG CGCTCAGCGG CGCCCGCAGC
 961 GAGTGGGGCC AATGGTGCAA CGTGAACCCC GCCGGCTTCG GCCAGCCCTT CACCACCAAC
1021 ACCAACAACC CCAACGTCGA CGCCATCGTC TGGGTCAAGC CCGGCGGCGA GTCGGACGGC
1081 CAGTGCGGCA TGGGCGGCGC CCCGGCCGCC GGCATGTGGT TCGACGCGTA CGCGCAGATG
1141 CTGACGCAGA ACGCCCACGA CGAGATCGCC CGCGGCGCTG CCGGCAGTGG TGGTGGCAAC
1201 AACGGCGGCG GCAACAACCC CAACCCGACC CCGACCAACC CGACAAACCC GGGCCCGACC
1261 AGCAACCCGG GCGGCGGCAA CTGCGCCAGC AAGTGGGGCC AGTGCGGTGG TCAGGGATGG
1321 GCCGGCCCGA CCTGCTGCGA GGCTGGGTCG ACTTGCACCC GCCAGAACGA GTGGTACTCA
1381 CAGTGCCTGT AAAGAAAAAA GAGTGCGGTT GCTGTCACGG TGTGACGTT GTATATAGCA
1441 CGTCCCGGTT AGGCTTTAGA GCACACTGGC GGCCGCTCGA GCATGCATCT AGA
```

FIGURE 3

```
                 10        20        30        40        50        60
                  |         |         |         |         |         |
    3  -   60   GNPFSGRTLLVNSDYSSKLDQTRQAFLSRGDQTNAAKVKYVQEKVGTFYWISNIFLLR
    molA                SS  HHHHHHHHHHHHHH    HHHHHHHHHHHH     SSS   333H
    molB                SS  HHHHHHHHHHHHHHHH  HHHHHHHHHHHH     SSS   333H
                 70        80        90       100       110       120
                  |         |         |         |         |         |
   61  -  120   DIDVAIQNARAAKARGENPIVGLVLYNLPDRDCSAGESSGELKLSQNGLNRYKNEYVNPF
    molA        HHHHHHHHHHHHHHH    SSSSSSS      333        333 HHHHHHHH HHHH
    molB        HHHHHHHHHHHHHHH    SSSSSSS      333        333 HHHHHHHH HHHH
                130       140       150       160       170       180
                  |         |         |         |         |         |
  121  -  180   AQKLKAASDVQFAVILEPDAIGNMVTGTSAFCRNARGPQQEAIGYAISQLQASHIHLYLD
    molA        HHHHHH     SSSSS    HHHHHHH    HHHHHHHHHHHHHHHHHHHHHH    SSSSSS
    molB        HHHHHH     SSSSS    HHHHHHH    HHHHHHHHHHHHHHHHHHHHHH    SSSSSS
                190       200       210       220       230       240
                  |         |         |         |         |         |
  181  -  240 . VANGGWLGWADKLEPTAQEVATILQKAGNNAKIRGFSSNVSNYNPYSTSNPPPYTSGSPS
    molA          HHHH   HHHHHHHHHHHHHHHHHHH        SSSS                333
    molB          HHHH   HHHHHHHHHHHHHHHH          SSSS                333
                250       260       270       280       290       300
                  |         |         |         |         |         |
  241  -  300   PDESRYATNIANAMRQRGLPTQFIIDQSRVALSGARSEWGQWCNVNPAGFGQPFTTNTNN
    molA        HHHHHHHHHHHHHH     SSSSS  SS                 SS
    molB        HHHHHHHHHHHHHHH    SSSSS  SS                 SS
                310       320       330       340
                  |         |         |         |
  301  -  347   PNVDAIVWVKPGGESDGQCGMGGAPAAGMWFDAYAQMLTQNAHDEIA
    molA        SSSSS                     HHHHHHHHH
    molB        SSSSS                     HHHHHHHHH
```

FIGURE 4

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```
    10          20          30          40          50          60
     |           |           |           |           |           |           |
 3 - 60     GNPFSGRTLLVNSDYSSKLDQTRQAFLSRGDQTNAAKVKYVQEKVGTFYWISNIFLLR
            SSLLLHHHHHHHHHHHHHH        HHHHHHHHHHHHH     SSSLLLLLLH


            70          80          90          100         110         120
             |           |           |           |           |           |
61 - 120    DIDVAIQNARAAKARGENPIVGLVLYNLPDRDCSAGESSGELKLSQNGLNRYKNEYVNPF
            HHHHHHHHHHHHHH     SSSSSSSLLLLLLLLLLLLLLLLLLLLLLHHHHHHHH HHHH


            130         140         150         160         170         180
             |           |           |           |           |           |
121 - 180   AQKLKAASDVQFAVILEPDAIGNMVTGTSAFCRNARGPQQEAIGYAISQLQASHIHLYLD
            HHHHHH      SSSSSLLLHHHHHHH    HHHHHHHHHHHHHHHHHHHH      SSSSSS


            190         200         210         220         230         240
             |           |           |           |           |           |
181 - 240   VANGGWLGWADKLEPTAQEVATILQKAGNNAKIRGFSSNVSNYNPYSTSNPPPYTSGSPS
            LLLHHHHHLLLLLHHHHHHHHHHHHHHHHH        SSSSLLLLLLLLLLLLLLLLLLLLLLL


            250         260         270         280         290         300
             |           |           |           |           |           |
241 - 300   PDESRYATNIANAMRQRGLPTQFIIDQSRVALSGARSEWGQWCNVNPAGFGQPFTTNTNN
            LLHHHHHHHHHHHHHH       SSSSS    SSLLLLLLLLLLLLLLLLLSS


            310         320         330         340
             |           |           |           |
301 - 347   PNVDAIVWVKPGGESDGQCGMGGAPAAGMWFDAYAQMLTQNAHDEIA
            SSSSSLLLLLLLLLLLLLLLLLLLLLLLLLLLLLLHHHHHHHHH
```

FIGURE 5

```
     90           100          110          120          130          140
      |            |            |            |            |            |
        YNGNPFEGVQLWANNYYRSEVHTLAIPQITDPALRAAASAVAEVPSFQWLDR


                150          160          170          180          190          200
                 |            |            |            |            |            |
        NVTVDTLLVQTLSEIREANQAGANPQYAAQIVVYDLPDRDCAAAASNGEWAIANNGVNNY


                210          220          230          240          250          260
                 |            |            |            |            |            |
        KAYINRIREILISFSDVRTILVIEPDSLANMVTNMNVPKCSGAASTYRELTIYALKQLDL


                270          280          290          300          310          320
                 |            |            |            |            |            |
        PHVAMYMDAGHAGWLGWPANIQPAAELFAKIYEDAGKPRAVRGLATNVANYNAWSVSSPP


                330          340          350          360          370          380
                 |            |            |            |            |            |
        PYTSPNPNYDEKHYIEAFRPLLEARGFPAQFIVDQGRSGKQPTGQKEWGHWCNAIGTGFG


                390          400          410          420          430          440
                 |            |            |            |            |            |
        MRPTANTGHQYVDAFVWVKPGGECDGTSDTTAARYDYHCGLEDALKPAPEAGQWFNEYFI


                450
                 |
        QLLRNANPPF
```

FIGURE 6

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```
  90          100         110         120         130         140
   |           |           |           |           |           |
       YNGNPFEGVQLWANNYYRSEVHTLAIPQITDPALRAAASAVAEVPSFQWLDR


            150         160         170         180         190         200
             |           |           |           |           |           |
       NVTVDTLLVQTLSEIREANQAGANPQYAAQIVVYDLPDRDCAAAASNGEWAIANNGVNNY


            210         220         230         240         250         260
             |           |           |           |           |           |
       KAYINRIREILISFSDVRTILVIEPDSLANMVTNMNVPKCSGAASTYRELTIYALKQLDL


            270         280         290         300         310         320
             |           |           |           |           |           |
       PHVAMYMDAGHAGWLGWPANIQPAAELFAKIYEDAGKPRAVRGLATNVANYNAWSVSSPP


            330         340         350         360         370         380
             |           |           |           |           |           |
       PYTSPNPNYDEKHYIEAFRPLLEARGFPAQFIVDQGRSGKQPTGQKEWGHWCNAIGTGFG


            390         400         410         420         430         440
             |           |           |           |           |           |
       MRPTANTGHQYVDAFVWVKPGGECDGTSDTTAARYDYHCGLEDALKPAPEAGQWFNEYFI


            450
             |
       QLLRNANPPF
```

FIGURE 7

```
HI_CEL6B   ......QSGN  PFSGRTLLVN  SDYSSKLDQT  RQAFLSRGDQ  TNAAKVKYVQ
  Q12646   NNGWGSGSTK  NFFDNQIYAN  PKFIEEVNSS  IPRLSYD...  ..LQQKAQKV


HI_CEL6B   EKVGTFYWIS  NIFLLRDIDV  AIQNARAAKA  RGENPIVGLV  LYN.LPDRDC
  Q12646   KNVPTAVWLA  WDGATGEVAQ  HLKAAGSK..  ......TVVF  IMYMIPTRDC


HI_CEL6B   SAGESSGELK  LSQNGLNRYK  NEYVNPFAQK  LKAASDVQFA  VILEPDAIGN
  Q12646   NANASAG...  .GAGNLNTYK  .GYVDNIART  IRSYPNSKVV  MILEPDTLGN


HI_CEL6B   MVTGTSAFCR  NARGPQQEAI  GYAISQL.QA  SHIHLYLDVA  NGGWLGWADK
  Q12646   LVTANSANCQ  NVRNLHKNAL  SYGVNVFGSM  SNVSVYLDAA  HGAWLG..SS


HI_CEL6B   LEPTAQEVAT  ILQKAGNNAK  IRGFSSNVSN  YNPYSTSNPP  PYTSGSPSPD
  Q12646   TDKVASVVKE  ILNNAPN.GK  IRGLSTNISN  YQS..ISS..  ..........


HI_CEL6B   ESRYATNIAN  AMRQRGLP.T  QFIIDQSRVA  LSGARSEWGQ  WCNVNPAGFG
  Q12646   EYQYHQKLAS  ALAAVGVPNM  HFIVDTGRNG  VTINSGT...  WCNLVGTGLG


HI_CEL6B   QPFTTNT..N  NPNVDAIVWV  KPGGESDGQ.  ........CG  MGG....APA
  Q12646   ERPRGNPNAG  MPLLDAYMWL  KTPGESDGSS  SGSRADPNCS  SNDSLRGAPD


HI_CEL6B   AGMWFDAYAQ  MLTQNAHDEI
  Q12646   AGQWFHDYFA  QLVRNARPSF
```

FIGURE 8

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```
HI_CEL6B    QSGNPFSGRT  LLVNSDYSSK  LDQTRQAFLS  RGDQTNAAKV  KYVQEKVGTF
  P78720    PSSDNFFENE  IYSNYKFQGE  VDISIKKLNG  D.....LKAK  AEKVKYVPTA


HI_CEL6B    YWISNIFLLR  DIDVAIQNAR  AAKARGENPI  VGLVLYN.LP  DRDCSAGESS
  P78720    VWLAWDGAPQ  EVPRYLQEAG  NK........  TVVFVLYMIP  TRDCGANASA


HI_CEL6B    GELKLSQNGL  NRYKNEYVNP  FAQKLKAASD  VQFAVILEPD  AIGNMVTGTS
  P78720    G....GSATI  DKYK.GYINN  IYNTSNQYKN  SKIVMILEPD  TIGNLVTNNN


HI_CEL6B    AFCRNARGPQ  QEAIGYAISQ  L.QASHIHLY  LDVANGGWLG  WADKLEPTAQ
  P78720    DNCRNVRNMH  KQALSYAISK  FGTQSHVKVY  LDAAHGAWLN  ..QYADQTAN


HI_CEL6B    EVATILQKAG  NNAKIRGFSS  NVSNYNPYST  SNPPPYTSGS  PSPDESRYAT
  P78720    VIKEILNNAG  S.GKLRGIST  NVSNYQS.IE  S.........  ....EYKYHQ


HI_CEL6B    NIANAMRQRG  LP.TQFIIDQ  SRVALSGARS  E.W.GQWCNV  NPAGFGQPFT
  P78720    NLNRALESKG  VRGLKFIVDT  SRNGANVEGA  FNASGTWCNF  KGAGLGQRPK


HI_CEL6B    TNT...NNPN  VDAIVWVKPG  GESDGQ....  .....CGMGG  ....APAAGM
  P78720    GNPNPGSMPL  LDAYMWIKTP  GEADGSSQGS  RADPVCARGD  SLQGAPDAGS


HI_CEL6B    WFDAYAQMLT  QNAHDEI
  P78720    WFHEYFTMLI  QNANPPF
```

FIGURE 9

5

```
HI_CEL6B   QSGNPFSGRT  LLVNSDYSSK  LDQTRQAFLS  RGDQTNAAKV  KYVQEKVGTF
   P78721  PTSDNFFENE  LYSNYKFQGE  VDQSIQRLSG  S.....LQEK  AKKVKYVPTA


HI_CEL6B   YWISNIFLLR  DIDVAIQNAR  AAKARGENPI  VGLVLYN.LP  DRDCSAGESS
   P78721  AWLAWSGATN  EVARYLNEAG  SK........  TVVFVLYMIP  TRDCNAGGSN


HI_CEL6B   GELKLSQNGL  NRYKNEYVNP  FAQKLKAASD  VQFAVILEPD  AIGNMVTGTS
   P78721  G....GADNL  STYQ.GYVNS  IYNTINQYPN  SRIVMIIEPD  TIGNLVTANN


HI_CEL6B   AFCRNARGPQ  QEAIGYAISQ  L.QASHIHLY  LDVANGGWLG  WADKLEPTAQ
   P78721  ANCRNVHDMH  KQALSYAISK  FGTQKNVRVY  LDAAHGGWLN  ..SSADRTAE


HI_CEL6B   EVATILQKAG  NNAKIRGFSS  NVSNYNPYST  SNPPPYTSGS  PSPDESRYAT
   P78721  VIAEILRNAG  N.GKIRGIST  NVSNY.....  ..QPVYS...  ....EYQYHQ


HI_CEL6B   NIANAMRQRG  LP.TQFIIDQ  SRVALSGARS  EWGQWCNVNP  AGFGQPFTTN
   P78721  NLNRALESRG  VRGMKFIVDT  SRNGRNPSSA  T...WCNLKG  AGLGARPQAN


HI_CEL6B   T..NNPNVDA  IVWVKPGGES  DGQ......C  GMGG....AP  AAGMWFDAYA
   P78721  PDPNMPLLDA  YVWIKTPGES  DSASSADPVC  RNSDSLQGAP  AAGSWFHDYF


HI_CEL6B   QMLTQNAHDE  I
   P78721  VMLLENANPP  F
```

FIGURE 10

INTERNATIONAL SEARCH REPORT

	International application No.
	PCT/DK 98/00299

A. CLASSIFICATION OF SUBJECT MATTER

IPC6: C12N 9/42, C11D 3/386
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC6: C12N, C11D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI, CA, BIOSIS, MEDLINE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WO 9812307 A1 (NOVO NORDISK A/S), 26 March 1998 (26.03.98), abstract	23-39
X	WO 9407998 A1 (NOVO NORDISK A/S), 14 April 1994 (14.04.94), page 2, line 12 - line 22, abstract	23-39
X	WO 9524471 A1 (NOVO NORDISK A/S), 14 Sept 1995 (14.09.95), abstract	23-39
X	WO 9502042 A1 (BIOMOLECULAR RESEARCH INSTITUTE LTD ET AL), 19 January 1995 (19.01.95), abstract	23-39

[X] Further documents are listed in the continuation of Box C.   [X] See patent family annex.

*	Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A"	document defining the general state of the art which is not considered to be of particular relevance		
"E"	erlier document but published on or after the international filing date	"X"	document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"L"	document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)		
"O"	document referring to an oral disclosure, use, exhibition or other means	"Y"	document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"P"	document published prior to the international filing date but later than the priority date claimed	"&"	document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
18 November 1998	0 1 -12- 1998

Name and mailing address of the ISA/	Authorized officer
Swedish Patent Office Box 5055, S-102 42 STOCKHOLM Facsimile No. +46 8 666 02 86	Yvonne Siösteen Telephone No. +46 8 782 25 00

INTERNATIONAL SEARCH REPORT

International application No.

PCT/DK 98/00299

C (Continuation).   DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 8909259 A1 (NOVO INDUSTRI A/S), 5 October 1989 (05.10.89), page 1, line 5 - line 29, claim 11	1-22
A	WO 9720025 A1 (UNILEVER N.V. ET AL), 5 June 1997 (05.06.97), page 3, line 1, claim 2	1-22
A	Dialog Information Service, File 155, Medline, Dialog accession No. 08665148, Medline accession No. 96236181, Denamn S. et al: "Charactreization of a Neocallimastrix patriciarum cellulasa cDNA (celA) homologous to Trichoderma reesei cellobio-hydrolase II", Appl Environ Microbiol (UNITED STATES) Jun 1996, 62 (6) p1889-96	17,18
A	Databas Swissprot, accession no. P46236, Sheppard P.O. et al "Putative Endoglucanase Type B Precursor", Gene 150:163-167, (1994)	19
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